

AIR DEFENSE ARTILLERY

Journal



Contents

- 4 Leading with a PHD mindset**
COL(P) Richard A. Harrison
- 6 Modernizing Air and Missile Defense**
BG Brian W. Gibson
- 8 164th Air Defense Artillery answers the call in 2020**
- 11 M-SHORAD units arrive to 5-4th ADA**
Courtesy of Army Futures Command
- 12 M-SHORAD system completes testing on White Sands Missile Range**
Drew Hamilton
- 14 Army leaders address AMD convergence at AUSA**
Jason B. Cutshaw
- 15 Combined Task Force Defender Building a collaborative team on the Korean Peninsula**
LTC Joseph "Roland" DeVries
- 18 Combatting the corrosives 38th ADA's creative approach**
Chaplain (MAJ) Mark A. Johnston
- 21 Nimble Fire from a warfighter perspective Capitalizing on leader growth and development**
CW3 Kevin Kruthers
- 23 ADA struggles within the JAGIC**
MAJ Danny Lee Rumley Jr.
- 28 Building cohesive teams on the Korean Peninsula during the COVID-19 era**
1LT Avik-Ul Alam
- 30 Practice makes perfect 38th ADA proves ready to defend**
SGT Raquel Birk
- 32 Operation Another One Bites the Dust**
1LT Carla Dutt
- 35 Large-Scale Combat Operations**
CPT Oren Rosen
- 40 Guardian Battalion response to COVID-19**
CPT Eric S. Warren

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Purpose

The Air Defense Artillery Journal serves as a forum for the discussions of all U.S. Army Air Defense Artillery professionals, Active, Reserves and National Guard; disseminates professional knowledge about progress, development and best use in campaigns; cultivates a common understanding of the power, limitations and application of fires, both lethal and nonlethal; fosters fires interdependency among the armed services, all of which contribute to the good of the Army, joint and combined forces and our nation. The Air Defense Artillery Journal is pleased to grant permission to reprint; please credit Air Defense Artillery Journal, the author(s) and photographers.

On the cover: A Soldier from the 5th Battalion, 4th Air Defense Artillery Regiment, sits in the gunner seat of an M-SHORAD weapon system during a long testing and training mission at White Sands Missile Range. (Courtesy photo/U.S. Army)

AIR DEFENSE ARTILLERY WARRANT OFFICERS!

YOU WILL BE TRUSTED.

YOU WILL BE REMEMBERED.

COME MAKE A DIFFERENCE!



"The most successful Warrant Officers are the ones who act as the unit Ombudsman -- for maintenance, logistics, personnel, and training. They understand the standards, procedures, and processes, and are tireless in pursuit of mission accomplishment. The best Warrant Officers are part of a vast professional and personal network that can be relied upon 24/7 to work issues. Their advice, recommendations, and counsel is unvarnished, and they are as at ease working with Privates and 2LT's as they are with CSMs and Generals."

– LTG Karbler



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COL(P) Richard A. Harrison
Air Defense Artillery School Commandant

Leading with a PHD mindset

As I travel around the Air Defense Artillery footprint, I see Soldiers living the Army Values. Whether in uniform or not, they proudly embody the seven core institutional beliefs of Loyalty, Duty, Respect, Selfless Service, Honor, Integrity and Personal Courage. For them, these are not mere words but a way of life in a time-honored profession. From the Battle of Bunker Hill to our present War on Terror, these words have served as our moral compass to make us into the finest fighting force in the world. Not only are we the best-led and best-equipped Army, but we are also the best from an ethical perspective. We are warriors and members of a team committed to treating everyone with dignity and respect. Racism, extremism, sexual assault/harassment, and suicide have no place in our ranks, especially in the Air Defense Artillery. These corrosives are in direct opposition to all that we stand for and esteem. As leaders and members of America's finest fighting force, we must do our part to maintain good discipline and order. That means we must always champion the Army Values and challenge those within our sphere of influence to do likewise. In addition, we must possess an attitude full of pride, hustle and desire (PHD). We should manifest pride in all that we think, say or do. We should always lead by example and set the standard for others to emulate regardless of the duty position. We must daily act the role we assume with poise, confidence and professionalism because you never know who may be watching and modeling their behavior by the one you demonstrate.

Many may ask, how does one get a PHD mindset? What are the requirements? Is it hard to obtain, or

is it just a "military thing?" A PHD mindset is a state of being which is easy to develop. There are no special requirements, and anyone can get one. Moreover, it can be applied in any setting. It is not just a military thing; it is practically anywhere and in any occupation where human interactions exist. Possessing pride, hustle and desire is naturally within each one of us. However, exercising these principles is a matter of sheer willpower and opportunity. You can set the example by caring about how you look and how you present yourself to others. The pride you take in how you do your job and your team's accomplishments demonstrate a winning matters philosophy. A true professional is prompt, prepared, decisive and passionate. Obtaining a PHD mindset is merely a matter of being involved in what you do. It is human nature in action. It is the absolute best of us on display for others to see and to follow. For example, by taking pride in your appearance, being tactically and technically proficient in your craft, and looking out for those under your care, not only are you demonstrating exemplary leadership, but you are also showing good PHD attributes!

In the Army, we do two things every day. We train Soldiers and grow them into leaders. Everything else we do is subordinate to those two imperatives. However, to accomplish training Soldiers and develop them into leaders requires competent individuals in their warrior tasks who live the Army Values and have a PHD mindset.

Regardless if you are a squad leader, a military commander, a college professor, or president of a vast enterprise, you can exhibit and apply the PHD tenets to your

A Terminal High Altitude Area Defense interceptor missile launches during a flight test at the Ronald Reagan Ballistic Missile Defense Test Site in the Marshall Islands, Aug. 30, 2019. The Missile Defense Agency, Ballistic Missile Defense System Operational Test Agency and Soldiers assigned to the 11th Air Defense Artillery Brigade conducted the intercept test. (Courtesy photo/U.S. Army)

leadership style and encourage others to tap into their PHD and do likewise. The results of your effort will yield unlimited growth for your organization and those you lead.

We must never forget that we are public servants and members of a team. We serve the people of the United States and live the Army Values. We are American Soldiers, civilians and contractors committed to upholding our Constitution, defending our nation, and protecting our way of life.

Such a pledge requires each of us to get and exercise a PHD attitude. It is not just a leadership multiplier; it is simply the right thing to do.

First to Fire!





BG Brian W. Gibson

Air and Missile Defense Cross Functional
Team Director

Modernizing Air and Missile Defense

“Overmatch is about fighting and winning, but overmatch is also about the ability to deter,” said GEN Mike Murray, commander of Army Futures Command (AFC), during the AUSA Global Force Next symposium. During the symposium, GEN James McConville, Chief of Staff of the Army, released an Army Multi-Domain Transformation paper with modernization priorities focused on speed, range, convergence, decision dominance, and overmatch. The Air and Missile Defense (AMD) enterprise led by the Air and Missile Defense Cross Functional Team (CFT) has aggressively attacked GEN McConville’s priorities to modernize the AMD force and achieve overmatch of our adversaries, and subsequently effectively deter them.

The AMD CFT’s mission is to drive the Army’s AMD modernization priorities, reducing critical capability gaps by rapidly integrating and synchronizing developmental requirements to deliver AMD capabilities to the Warfighter faster. The AMD CFT works to develop signature systems that will defeat air and missile threats against the U.S. forces, our joint partners and our allies. AMD is one of the Army’s top modernization priorities and is critical to winning in a fight against a near-peer adversary.

The AMD CFT is focused on four Signature Modernization Efforts, working to create programs to meet AFC’s modernization priorities of speed, range, convergence, decision dominance, and overmatch.

Army Integrated Air and Missile Defense (AIAMD) gives us the ability to have decision dominance and the convergence of AMD assets by replacing multiple disparate command and control systems; enabling improved, coordinated engagements; positive

control of sensors and weapons; friendly protection; and shared situational understanding. AIAMD provides a common mission command across all Army AMD echelons, improves combat identification and joint integration, and allows for flexibility in task organization. Integrated Air and Missile Defense Battle Command System (IBCS) is the materiel solution for the AIAMD program. IBCS provides a net-centric, plug and fight system-of-systems capability to the AIAMD architecture.

The IBCS system is the first successful Acquisition Category 1D (Office Secretary of Defense level milestone decision authority) Milestone C decision for the Army in many years. The Defense Acquisition Executive approved entrance into the production and deployment phase of the program lifecycle and directed the Army to procure the next two battalions worth of IBCS equipment.

Maneuver-Short Range Air Defense (M-SHORAD) will have the speed and mobility to defend maneuvering forces against unmanned aerial systems (UAS), rotary-wing, and residual fixed-wing threats. The Army strategy is to deliver an initial four battalions (144 systems) by fiscal year 2023 with an existing mix of guns, missiles and onboard sensors integrated on a Stryker platform. Follow on battalions will be equipped with enhanced effectors, such as lasers or improved missiles. Through the aggressive implementation of the Army’s Directed Requirement within 18 months, the AMD CFT worked with stakeholders to design, prototype and test this system. A platoon of Soldiers from the 5th Battalion, 4th Air Defense Artillery received a fielding of four M-SHORAD vehicles and subsequently participated in an operational assessment. The

Army will field the rest of 5-4th ADA in Germany later this year.

Indirect Fire Protection Capability (IFPC) is considered a short-range Air Defense weapon. The system will include a longer-range missile than traditional short-range Air Defense weapons. Since it will operate on IBCS, the IFPC program will address GEN Murray's range and decision dominance priorities. IFPC defends fixed and semi-fixed assets against sub-sonic cruise missiles and UAS threats. IFPC will also have a residual capability against rotary-wing and fixed-wing aircraft and future capability against rockets, artillery and mortar projectiles.

Based on urgent needs from the force, direction from Congress, and a directed requirement from the Army, the U.S. has purchased two batteries of the combat-proven Israeli Iron Dome system as an interim capability. Iron Dome is the Army's interim "gap filler" cruise missile defense capability due to interoperability challenges. Soldiers from our two Iron Dome batteries are currently testing, training and preparing for future stationing of these systems. The Army is conducting further interoperability testing on Iron Dome later this year.

Meanwhile, the Army is aggressively pursuing the enduring Indirect Fire Protection Capability. IFPC fills gaps between tactical short-range air defense and strategic air and missile defense such as the Patriot and the Terminal High Altitude Area Defense System. An enduring IFPC shoot-off competition is scheduled for this year. The selected enduring IFPC solution will be integrated with IBCS, ensuring we maintain convergence and decision dominance.

Lower-Tier Air and Missile Defense Sensor (LTAMDS) will significantly increase the range and other capabilities compared to the legacy Patriot radar while also adding a 360-degree capability. Since it will be on the IBCS network, it will also share superior target information to other weap-

on systems. LTAMDS delivers sensor capability to counter advanced threats and takes full advantage of the Patriot Missile Segment Enhancement capability. By design, LTAMDS will be integrated into the AIAMD architecture to provide a significant improvement over the current Patriot radar while enabling incremental growth. The Army has conducted numerous Soldier touchpoints on the initial LTAMDS prototype. These Soldier engagements help generate feedback in the design process to ensure new equipment meets Army requirements.

"Our air and missile defense is in tremendous demand around the world," GEN McConville said. "There's a bright future for air and missile defense, but it'll be across a spectrum."

As part of Army Futures Command, the AMD CFT has created irreversible momentum in transforming air and missile defense by providing speed, range, convergence and decision dominance.

These are the most consequential years in AMD since the Cold War. Working with our warfighters, industry and academia, we will develop the capability to deter and if necessary, defeat our nation's near-peer adversaries.



164th Air Defense Artillery answers the call in 2020



MG Timothy J. Sheriff, Commander, 263d Army Air and Missile Defense Command, along with CSM Davin Powell, recognize 1-265th Air Defense Artillery Soldiers after the most successful Operational Readiness Evaluation in the history of the National Capitol Region-Integrated Air Defense System mission in January 2020. (1LT Valeria Pete/U.S. Army)

In January 2020, Senator Rick Scott of Florida stops by to congratulate 1st Battalion, 265th Air Defense Artillery Soldiers on a successful National Capitol Region-Integrated Air Defense System mission that included achievements such as the most movements of Advanced Medium Range Air-to-Air Missiles for the National Advanced Surface-to-Air Missile System. (1LT Valeria Pete/U.S. Army)

It was an unprecedented year for the 164th Air Defense Artillery Brigade as Soldiers were called to support civilian authorities across the state to help keep Floridians safe during the COVID-19 pandemic, while simultaneously training and mobilizing Soldiers to conduct their Air Defense mission.

In March, 3rd Battalion, 265th Air Defense Artillery launched into 2020 as first in response to the COVID-19 pandemic setting up the first Community-Based Testing Site (CBTS) at the Orange County Convention Center in Orlando, Florida. Task Force Lightning was comprised of 172 Lightning Battalion Soldiers, 30 - 2nd Battalion, 124th Infantry Battalion medics, 78 Department of Health nurses and 23 Orange County law enforcement officers. Mobilized from March 14 to April 9, 2020, they tested almost 3,000 Florida citizens, screened over 2,200 vehicles and tested over 750 first responders along with 850 health care workers.

The 3rd Battalion, 116th Field Artillery Regiment quickly shifted focus from Western Strike 20 to COVID-19 response efforts. They assumed operation for the CBTS at the Orange County Convention Center in Orlando, Florida, airport screening at Orlando International Airport and mobile testing teams at elder care facilities.

In April, the 715th Military Police Company was given short notice of selection to deploy in support of the Southwest Border Mission. They mobilized in October to Fort Bliss, Texas, with more than 100 Soldiers.

Meanwhile, 1st Battalion, 265th Air Defense Artillery staged Avenger Fire Units at a training site in preparation for a Falcon Virgo Exercise, the final certification gate before the battle handoff between 1-265th ADA (FLARNG) and 1st Battalion, 204th Air Defense Artillery (MSARNG). This ensured a seamless transition between National Guard Air Defense Artillery states on the National Capital Region-Integrated Air Defense System (NCR-IADS) mission.

In July, the brigade headquarters mission command element returned from a year-long deployment to Germany in support of the European Deterrence Initiative (EDI). While deployed, they provided mission command of U.S. Air and Missile Defense forces spread out over four countries and two conti-



A Soldier with the Headquarters and Headquarters Battery 164th Air Defense Artillery Brigade conducts the maximum deadlift during the Army Combat Fitness Test, Oct. 17, 2020 in Orlando, Florida. (1LT Valeria M. Pete/U.S. Army)

nents, trained and participated in several multi-national joint exercises, responded to real world contingency crisis planning and enhanced the alliance with our European allies in order to deter aggression.

In August, the brigade headquarters mobilized Task Force Anaconda, the brigade's 8th Task Force rotation to provide mission command of the ground-based air defense systems in the NCR since the 9/11 attacks.

In September, 3-265th ADA BN shifted focus from COVID-19 response efforts to preparing for their federal mobilizations to both the NCR in support of NCR-IADS and Europe in support of the EDI. During their 36-day massive training event (MTE) they conducted weapons qualification, Army warrior tasks,



Soldiers with 3-265th Air Defense Artillery Battalion pose for a photo after shooting down six outlaw planes following the unit's M3P range during Annual Training at Camp Blanding Joint Training Center (CBJTC), Florida, September 2020. (Courtesy photo)

battle drills, combat life saver training and 14 Series table qualification. The MTE culminated by a field training exercise for EDI where they spent four days practicing and refining their field craft and with Exercise America's Shield for NCR where they conducted 24-hour operations prosecuting targets of interest over four days.

In October, 1-265th ADA occupied the new state-of-the-art Flagler Palm Coast Readiness Center located in Palm Coast, Florida. This facility was years in the making and promises to provide the 1-265th ADA a modern facility to tackle all future endeavors on the horizon for decades to come.

In December, the 164th ADA BDE assumed mission command responsibilities from the 50th Regional Support Group of Florida's COVID-19 response mission in order to continue supporting the Department of Health and our civilian partners in helping Floridians.

Although faced with challenges and a high OP-TEMPO year, the 164th ADA Brigade's experience and preparation led to successful mobilizations, post mobilizations and certifications. They remain steadfast for continuing future state and federal missions.

A red-tinted photograph of an air defense artillery vehicle, likely a Patriot missile launcher, with a soldier in camouflage gear standing next to it. The vehicle's large, angled launchers are visible, and a soldier is standing near the base of the structure. The background shows a grassy field and a fence.

AIR DEFENSE ARTILLERY IN THE NEWS



The 5th Battalion, 4th Air Defense Artillery Regiment, 10th Army Air and Missile Defense Command, is the first unit in the Army to receive the Maneuver Short-range Air Defense system. The M-SHORAD integrates existing guns, missiles, rockets and sensors onto a Stryker A1 vehicle. The system is designed to defend maneuvering forces against unmanned aircraft systems, rotary-wing and residual fixed-wing threats. (CPT Jordan Allen/U.S. Army)

M-SHORAD units arrive to 5-4th ADA

Courtesy of Army Futures Command

The Department of the Army announced today that the 5th Battalion, 4th Air Defense Artillery Regiment, a subordinate unit under the 10th Army Air and Missile Defense Command based in Ansbach, Germany, is the first to field and test the Maneuver Short-range Air Defense (M-SHORAD) system.

The regiment received four M-SHORAD systems.

M-SHORAD will defend maneuvering forces against unmanned aircraft systems, rotary-wing and fixed-wing threats.

The Army will field 144 systems to four battalions beginning this year, followed by an enduring capability for additional battalions.

The M-SHORAD integrates the turret with multiple selectable effectors onto a Stryker A1 vehicle. Future variants of M-SHORAD

will include technology insertions such as directed energy, which will provide a capability against unmanned aircraft systems, rotary-wing and residual fixed-wing threats, rockets, artillery and mortars.



A Soldier from the 5th Battalion, 4th Air Defense Artillery Regiment, sits in the gunner seat of an M-SHORAD weapon system during a long testing and training mission at White Sands Missile Range. (Courtesy photo)

M-SHORAD system completes testing on White Sands Missile Range

Drew Hamilton

Soldiers from the 5th Battalion, 4th Air Defense Artillery Regiment have wrapped up a long testing and training mission at White Sands Missile Range.

The unit, which was attached to the Maneuver Short-Range Air Defense Program since the summer, closed the mission with an award ceremony held Dec. 3 on White Sands Missile Range. Following the final short field exercises, the unit began the process to return to Germany and prepare

the rest of the 5-4th ADA to receive the system and begin putting it into use.

Since it is a new Air Defense system, the Soldiers have been training on the use of the system, and conducting a final round of operational assessments, to conduct a kind of final quality control review before the weapons system is finalized and delivered to Army Air Defense units for use in future operations.

"The Soldiers provided valu-

able input for us to take back and make improvements for the future of the system," said LTC Michael Bryant, M-SHORAD action officer for the Air and Missile Defense Cross Functional Team. "They also had some very good, successful engagements with the Hellfire missiles, making huge progress for the Army."

M-SHORAD is a Stryker-mounted Air Defense platform, providing the Army with a replacement to the legacy Avenger system. It is



better armored, better armed, and more mobile than the system it's replacing. The M-SHORAD is going to provide the Soldier with a flexible Air Defense solution that can keep up with a unit on the move, closing out a vulnerability as the use of low-altitude threats — such as helicopters and small drones — is on the rise.

"We've learned so much about it, we really enjoy. We know that we can push metal and really take care of the job — especially for a deployment," said SGT Jae Eddings, gunner with 5-4th ADA and the first woman to fire the M-SHORAD's missile system. "High confidence, I enjoy it way more than the Avenger, especially since it has air conditioning and heat ... the other thing I love about it is the daytime running camera that is most definitely better than our old system."

Beginning in the summer, and made all the more difficult due to mandatory COVID-19 quarantine periods, the Soldiers came to WSMR and learned how to use the

system before taking it out onto the range and conducting extensive live-fire drills where they shot down numerous aerial targets representing real-world aerial threats.

"White Sands was an amazing place to give us space and opportunity to test the myriad of fixed-wing and rotary-wing assets in order to truly test what this system is capable of doing," said MSG Derrick Lee, operations NCOIC for the Air and Missile Defense Cross Functional Team.

The Soldiers used the system as expected, and gave feedback to the program office and vendor allowing the incorporation of a final list of improvements to the system. Much like a quality control team working on a commercial product, the improvements were the kind that may be minor, but can improve the experience of the end user, and make the system just generally work better.

"There were a lot of things that from a design standpoint the Soldiers were able to test and understand its limitations," Lee said. "I think it's very important for the Soldier to come and test the system, because we want to give the Soldier the very best equipment to be able to fight and win wars on today's battlefield. And what better way to have them understand what they are working with before they take that system into combat."

This kind of operational testing is a vital component of all acquisitions programs. One of the most important things is the confidence the Soldier has in a new system. A Soldier needs to know that the system will not only work, but they also need to know some of the nuances of using the system that only a Soldier can prove out.

The secondary mission was for the Soldier to train up on the use of the system, allowing them to go back to their home unit in Ansbach, Germany, and become the first set of Soldier trainers for the unit's transition to the new system.

BG Brian Gibson, director, Air and Missile Defense Cross Functional Team, visited the detachment, gave awards to several remarkable Soldiers, and recognized the entire detachment for its efforts on the system.

"You get a few months where you are the only experts, not in the battalion, not in Europe, but across the globe, you are the only experts on this piece of kit, so be proud about it," Gibson said.

The M-SHORAD system represents more than just a new weapon system, it's also an example of the Army's new rapid acquisition cycle in action. In the past the development of a new system has been a long process that could easily take a decade to start to generate results. M-SHORAD, by comparison, only took a few years to go from initial shoot-off and selection to a finished product deliverable to the Soldier.

"From the time the Army said 'yep we want to do this' to the point at which the metal was bent and we got it out here, was record time," said Gibson. "It matters. This wouldn't have happened years ago, and it wouldn't have happened without the support of Congress, it wouldn't have happened without our military leadership giving us both the direction and authority, and the stand-up of Army Futures Command that allows us to expedite capabilities."

Like many test programs, the M-SHORAD system will likely continue to see activity on WSMR in the future, as the system gets upgrades, and new capabilities are added.

Drew Hamilton is a public affairs specialist at White Sands Missile Range who has been supporting the test and evaluation mission since 2006. Prior work includes public affairs for the Army Aviation Warfighting Center, Fort Rucker, Alabama, live television production at KDBC (CBS) in El Paso, Texas, and an independent artist.

Army leaders address AMD convergence at AUSA

Jason B. Cutshaw

The Army's senior Air Defender discussed the importance of integrating sensors and weapons into a common command architecture that will improve future air and missile defense engagements and force operations during the Association of the United States Army's symposium, March 17.

LTG Daniel L. Karbler, commanding general of U.S. Army Space and Missile Defense Command and commander of Joint Functional Component Command for Integrated Missile Defense, joined other key Army leaders on a panel during AUSA's Global Force Next symposium to discuss the current status of the Air and Missile Defense Cross Functional Team's four signature modernization efforts and how future AMD convergence will support multi-domain operations.

"Whether they are pursuing capabilities and increasing capacities or using it today against our Soldiers or against other countries, our adversaries are not taking a pause," Karbler said. "When you further integrate space into deterrence, you gain a better understanding that the breadth of 21st century strategic deterrence includes not just the nuclear triad that we are all familiar with, but 21st century deterrence brings in the other domains of space, cyber, electromagnetic-spectrum as well as the use of conventional forces. So convergence of these capabilities and effects remains critical for us."

"Within my operational forces in the 1st Space Brigade, the Satellite Operations Brigade or the 100th Missile Defense Brigade, we have been able to see the convergence of great leaders, Soldiers and civilians," Karbler added. "SMDC and JFCC IMD occupy the key terrain, which is the integration nexus among three combat-



LTG Daniel L. Karbler, commanding general of U.S. Army Space and Missile Defense Command and commander of Joint Functional Component Command for Integrated Missile Defense, addresses the Convergence in Air and Missile Defense Panel March 17 during the Association of the U.S. Army's Global Force Next symposium. (Courtesy illustration)

ant commands – U.S. Strategic Command, U.S. Space Command and U.S. Northern Command. That integration is critically important to a broad strategic deterrence mission."

Joining Karbler on the panel were BG Brian W. Gibson, director of the Air and Missile Defense Cross Functional Team with Army Futures Command; MG Robert A. Rasch Jr., Program Executive Officer Missiles and Space; MG Timothy J. Sheriff, commanding general of the Army National Guard's 263rd Army Air and Missile Defense Command; and Tom Karako, Ph.D, a senior fellow with the Center for Strategic and International Studies.

With AMD being a primary driver of the Army's modernization priorities, the leaders said reducing critical capability gaps by rapidly integrating and synchronizing developmental requirements will allow the Army to deliver AMD capabilities to the warfighter faster.

Integrated air and missile defense is the Army's contribution

to joint IAMD capabilities and provides for common mission command across all AMD echelons. AIAMD's open architecture maximizes flexibility, enhances protection of critical assets over a large battlespace, positively integrates sensors and weapons, enables improvement in coordinated engagements and creates shared situational understanding.

"We see how the convergence of sensors, effectors and command and control on the battlefield are going to allow us to increase our battlespace, take on the adversary challenges earlier, better command and control and more efficient use of our forces," Karbler said. "And as we have seen in some of our test events it is not just about active defense, it is not just about the defensive capabilities we have out there, it is integrating with the offensive capabilities that the Army and our joint partners are able to bring."

Jason B. Cutshaw is a public affairs specialist with U.S. Army Space and Missile Defense Command.



Combined Task Force Defender Soldiers take a group photo with ROKA SECFOR Soldiers after a successful readiness exercise. (Courtesy photo)

Combined Task Force Defender

Building a collaborative team on the Korean Peninsula

LTC Joseph "Roland" DeVries

Most Air Defense organizations are not afforded the opportunity to work as closely with their host nation partners as Combined Task Force (CTF) Defender. CTF Defender is tasked with a strategically significant mission on a forward operating site on the Korean Peninsula, which sets conditions for developing a better collaborative team and strengthening the alliance between U.S. forces and our Republic of Korea Army (ROKA) partners. CTF Defender is responsible for not only enabling a battery's air defense mission but, has other operational tasks as well. The responsibility for these operational tasks is shared between U.S. and ROKA forces. Key to CTF Defender's success is building one of the finest combined teams on

the peninsula and is based on a few simple tenets.

Setting the stage

First impressions matter and, when done correctly, create a solid foundation from which to build a lasting productive relationship. As with any two organizations that come together for a common goal or mission there is always apprehension and a little bit of angst about whether or not this is going to be a pleasant or trying experience. As with most assignments, this particular mission set requires periodic unit changeovers. By establishing productive and cooperative relationships with ROKA counterparts, CTF Defender is able to leverage outgoing leadership to pave the way and shape conditions

for future allied partners. If a solid relationship exists with the outgoing unit, they will be your advocate and promote the mission to the incoming organization. It is also helpful to have a good relationship with the supporting host nation higher headquarters. CTF Defender has developed this relationship over time to the point where ROKA leadership plans special trips to the site in order to participate in combined sporting events. These opportunities promote esprit de corps, teamwork and provide ample opportunities for developing working relationships at the leader level outside the realm of work.

After the initial introductions and the incoming unit has assumed the mission, ROKA leadership is invited to a combined dinner. To make these events par-

ticularly memorable, we host a special meal coordinated with the cooks showcasing American dishes that ROKA personnel have expressed an affinity for in the past. During these dinners, we introduce ROKA leadership to the rest of the leadership teams under CTF Defender, making sure that the seating arrangement encourages exchanges between both the U.S. and Korean Soldiers.

Inclusion

A large part of developing a cohesive team with alliance partners is ensuring they feel that they are valued members of a team, with an equal voice in the organization's direction. A big part of this success is to ensure that ROKA leadership is pulled into planning meetings, and their training objectives are captured and incorporated into formal and informal training events. Although a significant number of ROKA Soldiers speak English, CTF Defender interpreters are also present to translate and that slides are presented in Hangul whenever possible. CTF Defender ensures that every training opportunity includes an invitation to the ROKA unit to

Members of the Republic of Korea Army Security Forces detain an Opposing Force role-player during a training exercise. The OPFOR consisted of a mix of U.S. and ROKA Soldiers. (Courtesy photo)



CTF Defender and ROKA leadership share a meal in the Skyhill Dining facility. (Courtesy photo/CTF Defender staff)

participate. CTF Defender, in order to enhance and validate force protection measures, utilizes an organic opposing force (OPFOR) during frequent readiness exercises. The OPFOR teams for local training events are always a combined effort which further builds the rapport between organizations down to the lowest level; everyone loves being a part of OPFOR. Following training events, we ensure that ROKA leadership is invited to the After Action Review (AAR) and that they are active participants in the process. When we publish the final AAR, we have the finished product translated to Hangul and disseminated to our partners.

During holidays and special events, U.S. personnel make sure to invite the ROKA unit to participate in our celebrations and experience U.S. traditions. These events are open to both ROKA leadership and Soldiers alike. We have been particularly successful in introducing them to holidays they don't traditionally observe in Korea. Perhaps our greatest successes have included a pumpkin carving contest for Halloween, a traditional Thanksgiving meal, video game competitions, bingo and 4th of July festivities. All these

events have both raised U.S. Soldier morale and made ROKA personnel feel as though they are truly a part of a cohesive team while fostering relationships at all levels of the organization. The inclusion in these holiday events is hardly one-sided as our leadership and Soldiers have also received inclusive invitations to partake in Korean holidays such as Chuseok and the Lunar New Year.

Demolishing barriers that are often presented as "U.S. only" goes a long way to building a team as well. Giving ROKA Soldiers full access to U.S. gyms and recreational areas prevents a "haves and have not" dynamic. In another example of reciprocity, ROKA opened up their PX to U.S. Soldiers, further enhancing the "Katchi Kapshida" We Go Together spirit. Such inclusion pays dividends for our overall readiness and quality of life.

Work hard, play hard

What we do together as a combined organization when the duty day is done is as important, if not more important, than what is accomplished during the duty day.



Top: CTF Defender and ROKA SECFOR Soldiers perform a physical fitness challenge. (Courtesy photo)

Bottom: ROKA and U.S. Soldiers pose for a photo during Halloween festivities on Carroll. (CPT Sanchez/CTF Defender)

One activity that is ROKA-led is our weekly perimeter hikes where U.S. and ROKA leadership hike up and down the mountains surrounding our site, often ending with a stopover at a famous scenic overlook for a group picture.

As it is well known in the U.S. Army, physical fitness competitions do wonders for building a team. These competitions are combined events with individual and team portions. At all times, we are cognizant to avoid establishing a strict U.S. versus ROKA flavor, but always reward those who win in these exercises on the fields of friendly strife. These events have always drawn high rates of partic-

ipation, with a significant number of teams taking part.

Saturdays are typically our weekly sports day with ROKA where we have combined teams compete against each other in Jokgu (volleyball with your feet) or short field soccer. These events usually last several hours with no set teams and participants playing pickup games. The atmosphere is inclusive and the goal is to have everyone participate instead of assembling an unbeatable team.

Showing interest in their country

Showing a genuine interest in the Korean culture and language is well received and appreciated by the ROKA Soldiers we work with, further improving rapport with our teammates. They are proud of their long history and culture, enthusiastically promoting it if given the opportunity. Talking with ROKA Soldiers about Korean dishes and the experiences of visiting a Korean restaurant is a great way to show interest as well. These conversations will lead to other suggested outings and new Korean dishes to try.

Taking the time to engage the ROKA Soldiers on their special holidays like Chuseok (their thanksgiving), Lunar New Year, and Liberation Day (liberation from the Japanese Empire, 1945) shows a genuine interest in their culture.

In addition, learning a few basic words of Korean and using them in interactions with Korean leaders and Soldiers shows an interest in a part of their culture in which they take significant pride. They will enthusiastically reply back in Korean and endeavor to teach you a few more words or spend time teaching you how to read Korean. These micro interactions do add up to have macro level impacts on the overall dynamic between our organizations. The leaders at CTF Defender are ever aware of this reality and constantly seek to reinforce these positive exchanges.

Recognition of their contributions to the team

As it is an honor for us to work closely with our ROKA partners, it is an honor for them to work closely with us. Recognizing them with certificates of appreciation and tokens of friendship when their tour is complete creates a lasting memory of their time with CTF Defender. Ending a period of cooperation on such a high note cements positive impressions and also helps to 'pay it forward' to the incoming team.

A few closing thoughts

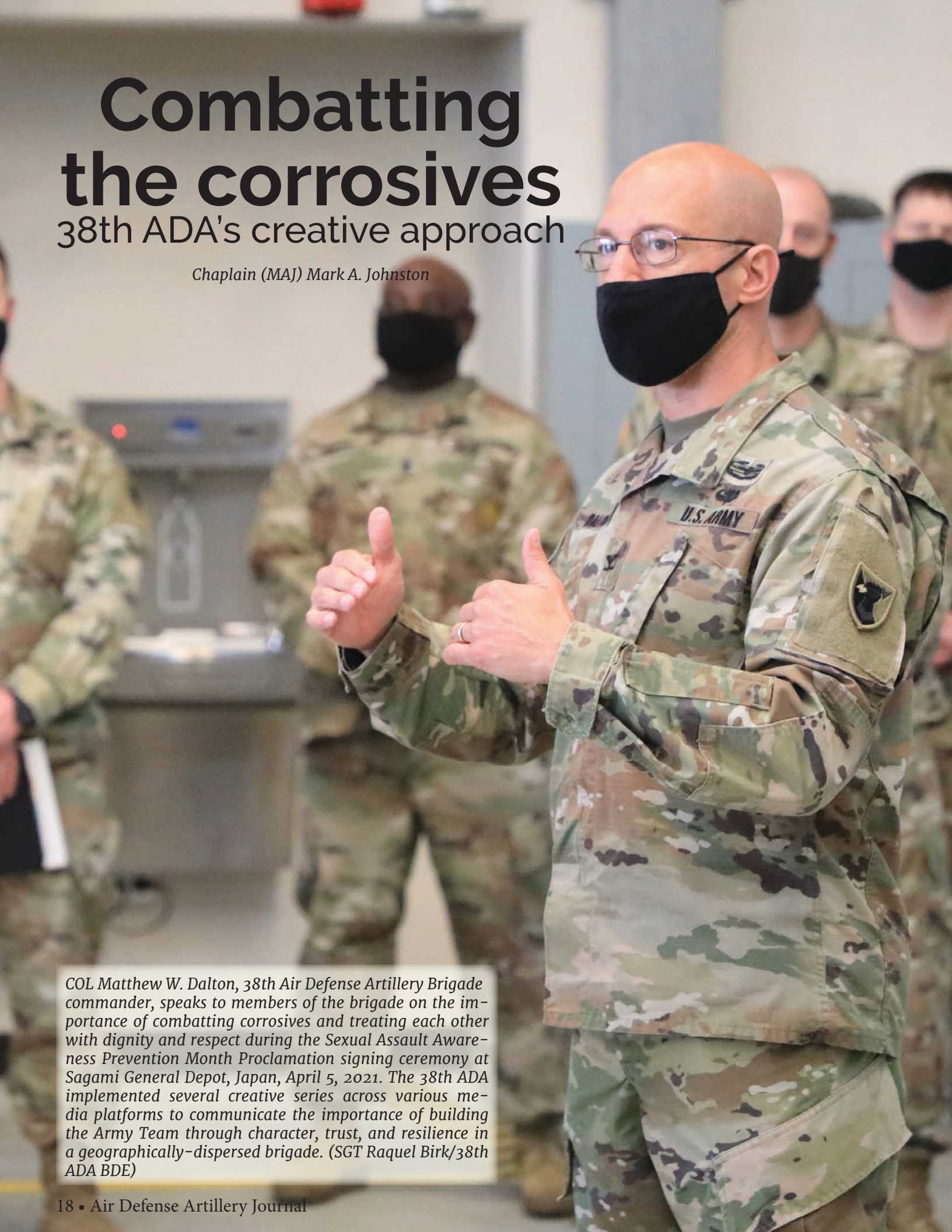
The opportunity to serve with the ROKA on a daily basis is a memorable experience that will be tough to surpass elsewhere. Treating ROKA personnel as valued and respected team members sets the conditions for a productive relationship. Applying these simple tenants has afforded CTF Defender the opportunity to build one of the finest combined teams on the peninsula, enhancing the alliance and making serving together an enriching experience for both ROKA Soldiers and U.S. Soldiers alike. With all the fun and personal satisfaction that comes from developing strong ties with our allied partners, it should not be forgotten that this directly facilitates and improves our ability to achieve our mission objectives as well.

LTC Joseph "Roland" DeVries has been an Air Defender for 25 years and is currently in his second year commanding Combined Task Force Defender under 35th Air Defense Artillery Brigade in South Korea. His passion is all things Air Defense, having worked with multiple air defense systems from the Avenger weapon system to the Theater High Altitude Area Defense weapon system.

Combating the corrosives

38th ADA's creative approach

Chaplain (MAJ) Mark A. Johnston



COL Matthew W. Dalton, 38th Air Defense Artillery Brigade commander, speaks to members of the brigade on the importance of combatting corrosives and treating each other with dignity and respect during the Sexual Assault Awareness Prevention Month Proclamation signing ceremony at Sagami General Depot, Japan, April 5, 2021. The 38th ADA implemented several creative series across various media platforms to communicate the importance of building the Army Team through character, trust, and resilience in a geographically-dispersed brigade. (SGT Raquel Birk/38th ADA BDE)



President Calvin Coolidge returned home one Sunday afternoon after attending morning worship services. His wife, who was unable to attend, asked him what the preacher's sermon was about. He replied: "Sin." His wife then proceeded to inquire more about the content of the sermon. Coolidge said: "Well, I think he was against it." Coolidge's response to his wife was concise and accurate. His pastor had clearly articulated the problem but I'm not sure that he communicated the solution as clearly.

Army Chief of Staff GEN James C. McConville charged the force to counter the three corrosives: sexual assault/sexual harassment, extremism/racism and suicide. In the Military Decision-Making Process, we learn that understanding the problem we are attempting to solve and creating a problem statement is of the utmost importance. Without an accurate definition of the problem, any solution we devise may be attempting to solve the symptoms associated with the problem rather than solving the problem itself. According to Field Manual 6-0, *Commander and Staff Organization and Operations*, "The problem statement is a concise statement of the obstacles preventing an organization from achieving a desired end state." In order to solve the problem of the three corrosives in the ranks, we must have a clear understanding of the obstacles preventing us from achieving our goals.

What problem are we trying to solve?

Sexual assault/sexual harassment, extremism/racism and suicide have roots in a common issue: the inability to treat our fellow human beings with dignity and respect. The Army is, and always has been, a values-based institution. The Army Values of Loyalty, Duty, Respect, Selfless Service, Honor, Integrity, and Personal Courage, undergird everything we do. These values are American values enshrined in the founding documents of our republic and serve as a guiding light for Americans since before the foundation of our great nation (Army Publishing Directorate 6-22, *Army Leadership and*

the Profession). The lack of knowledge of the Army Values and/or the inability or unwillingness to live them out in practice are the "obstacles preventing us from achieving a desired end state" of ending the corrosives in our ranks (FM 6-0).

In recently published Army extremism awareness discussion materials, which is used to "prevent negative behavior in the ranks," the 38th Air Defense Artillery is well ahead of the curve in implementing the steps necessary to counteract extremism and the corrosives that plague the U.S. Army. Two of the steps mentioned in this slide presentation for counteracting these corrosives are "Army Values Instruction" and "Character Instruction." The 38th ADA practiced these steps from its rededication in Japan in the following ways.

The 38th ADA hosts several initiatives with the purpose of communicating information and resources to Soldiers and families throughout three locations on mainland Japan, Okinawa and Guam. The initiatives are regularly shared across the Department of Defense on every social media platform. These include the series: SHARP Points; Ask the Doc; The Influence (Equal Opportunities) Podcast; Chaplain's Neighborhood' Resilience Talks; Pacific Guardian Fitness; and Army Values/Ethics Training.

The brigade Sexual Assault Response coordinator instituted 'SHARP Points,' an innovative and creative multi-media presentation of ways to raise awareness and combat sexual assault and harassment across the ranks. In coordination with the brigade Public Affairs Office and incorporating ideas gleaned from his knowledge of certain super-hero characters, SFC Matthew D. Spurlock created and starred in a seven-episode video series teaching the basics of recognizing, preventing and reporting sexual harassment and assault. In addition, he spoke on the importance of properly given and received consent and the need to treat each other with dignity and respect.

CWO2 Bradley Garrett, brigade Master Fitness Trainer, organized the Pacific Guardian Virtual Fitness program in which he demonstrates and explains specific exercises that can be done with simple body weight exercises.



Chaplain (MAJ) Mark A. Johnston, 38th Air Defense Artillery Brigade chaplain and host 'Chaplain's Neighborhood' resiliency talk videos, visits Kamakura, Japan, to speak on enhancing resilience and preventing suicide during the COVID-19 pandemic. (SGT Raquel Birk/38th ADA BDE)

es to prepare for the Army Combat Fitness Test during the pandemic. Rather than throw in the towel and create excuses for not remaining prepared (no access to equipment, can't go to the gym, etc.), Garrett used his extensive knowledge of physical training to create videos that teach Soldiers, step-by-step, how to remain physically fit despite the restrictions of the pandemic. These videos were shared across the DoD and inspired hundreds to not only maintain their physical readiness but, in many cases, moved Service Members to improve their physical fitness in a time when the opposite might be assumed.

"Ask the Doc" is a monthly program sponsored by our brigade surgeon, CPT Louis Chen, in which he answers any medical questions that might be asked by Soldiers in our unit and disseminates accurate and timely information on the safety and efficacy of vaccines and health practices while also de-bunking lies and half-truths often seen on social media and spread by rumor and innuendo. As the point person in creating and maintaining medical readiness, Chen has taken the truth directly

to the individual Soldier and has increased readiness and health in a substantial way.

Our Equal Opportunity advisor, SFC Joe Chacon, created and starred in a series of six podcasts on the importance of treating others with dignity and respect. His "The Influence Podcast" included a recent interview with the assistant course director for MX-400-Officership, at the Simon Center for the Professional Military Ethic, West Point Military Academy where they discussed how personal values, beliefs and attitudes shape our behaviors and perceptions.

As the brigade chaplain, I created and teach a series on the Army Values entitled "What Right Looks Like: Ethics/Army Values and the Profession of Arms," in which I use vignettes from U.S. History, the Arts (including music, movies, visual arts, comedy, philosophy, mythology and religion) to teach Soldiers the importance of Army Values and how the inculcation of those values creates a moral warrior who can face the rigors of combat and return to our society while retaining personal morality, personal dignity and self-respect.

In addition, our PAO, SGT Raquel Birk, and I created a series of 30 videos entitled "Chaplain's Neighborhood," recorded at different scenic places in central Japan, featuring the Army Values, personal stories, and guidance on remaining resilient during these trying times. These videos have been shown on every platform in the DoD and across every Armed Service, including the U.S. Coast Guard and the National Guard.

The 38th ADA Brigade is at the tip of the spear in leading by example in creating an Army rooted in the Army Values and thus rooting out extremism and the other corrosives that, if left unchecked, would destroy readiness. The 38th ADA Brigade remains ready to lead the Army by our example of valor and power in eliminating these corrosives from our ranks. We will continue to find innovative ways to combat the corrosives and increase readiness demonstrating to our friends and enemies that winning matters!

Together we will adapt and overcome and defeat the enemies of the U.S., including these corrosives, through hard work, initiative, creativity, and old-fashioned elbow grease and set the example as we challenge other units across the DoD to use the example we have set to be a professional fighting force without peer. "By Valor and Power!" "People First!" "Winning Matters!"

Chaplain (MAJ) Mark Johnston is currently the brigade chaplain for the 38th Air Defense Artillery Brigade at Sagami General Depot, Japan. His previous assignments include 23CBRNe on Camp Stanley, South Korea, 1-1st ADA Battalion in Okinawa, Japan, 14th Combat Support Hospital at Fort Benning, Georgia, and a tour of Iraq with the 13th Combat Sustainment Support Battalion formerly stationed at Fort Benning, Georgia. Johnston is endorsed by the North American Mission Board of the Southern Baptist Convention and received his Master's degree from the Southern Baptist Theological Seminary in Louisville, Kentucky. He is a husband, father and grandfather of two.



Nimble Fire from a warfighter perspective

Capitalizing on leader growth and development

CW3 Kevin Kruthers

Foreword: Nimble Fire is a series of Joint Integrated Air and Missile Defense (IAMD) Operator-in-the-Loop (OITL) events conducted by the Joint Integrated Air and Missile Defense Organization. Nimble Fire incorporates emerging technologies (next 5 to 7 years) and non-program of record capabilities in order to inform requirements and explore employment concepts for acquisition and warfighter communities. Nimble Fire is offered at the Virtual Warfare Center (VWC) in St. Louis, Missouri.

After my own experience participating in Nimble Fire 20B Event Week as an Army operator, I could easily affirm what is stated in the Army Missile Defense (AMD) Vision 2028 regarding events like

Nimble Fire. The VWC provides an ideal capability to conduct experimentation and war gaming with a real-time, OITL simulation environment and should be leveraged by the warfighting and acquisition communities. Experimentation is critical to defining the concepts of employment, concepts of operations, tactics, techniques and procedures, and rules of engagement for the AMD systems of tomorrow in order to enable the Army to win in large-scale combat operations (LSCO).

I advocate for Nimble Fire as a developmental growth opportunity for the future leaders of our branch, particularly our tacticians and planners. Experimentation

stretches their intellect beyond today and into the future. This grows leaders capable of expertly employing the full spectrum of AMD systems and fully exploiting new capabilities as they are fielded. LSCO, Joint and MDO simulations such as Nimble Fire afford the opportunity to test and develop new skills in synchronizing AMD capability in order to protect maneuver forces, defend critical assets in the theater and operational support areas, and converge AMD capabilities to help the joint force air component commander or area air defense commander create windows of air superiority that the joint force can exploit.

LTC Seth Barrett, the current Army lead for Nimble Fire, feels that our Air Defense Artillery Fire Control Officer (ADAFCO) and Patriot Top Gun (PTG) communities provide the ideal pool of participants to support Nimble Fire. "Whatever Air Defense systems are 5 to 7 years out there on the horizon, we are modeling here at the VWC. If you look at where a [Top Gun] or ADAFCO student would be 5 to 7 years when these capabilities are fielded, they will have experience with them when they are XO's and S3's," said Barrett.

Experienced operators with the requisite weapon system and tactics expertise offer key and relevant insights to solving the problems posed at Nimble Fire. Operators with relevant experience operating AMD systems also aid the Nimble Fire team in ensuring that tactical systems are not grossly misrepresented by the simulation, which could ultimately lead to misinforming the acquisitions process and employment concepts.

Steve Marley, who has served as the contractor lead for Nimble Fire since 2003, had this to say on warfighter support. "Warfighter participation is the key component of Nimble Fire. It is impossible not to learn in an environment that brings together "belt buckle wearing top-gun" operators from across the services and present challenging problem sets to them to work. In fact, it highlights Nimble Fire is a learning environment, not a winning environment – meaning the learning comes as much from failures in the simulation environment as it does from successes."

How do we as an Air Defense branch exploit Nimble Fire, particularly for our young officers and Warrant Officers with ADAFCO and PTG backgrounds? One of the challenges to solving this is that participants are required to hold a Top Secret – Sensitive Compartmented Information (TS-SCI) security clearance. There are very few ADAFCO or PTG duty assignments

authorized TS-SCI by modified table of organization and equipment (MTOE). Currently only the Army Air and Missile Defense Command (AAMDC) Senior ADAFCO (14A, O-4), ADAFCO (14A, O-3) and ADAFCO Tactician (140K, W-4) are authorized TS-SCI per MTOE. Presumably there are exceptions, authorizing additional TS-SCI clearances, but certainly not enough to enable the vision Barrett and I share for linking the ADAFCO and PTG courses to experimentation. If TS-SCI authorizations were increased for our ADAFCO and PTG duty assignments branch-wide, I'd propose aligning the end dates of these courses with Nimble Fire events, in order to provide a follow-on opportunity for the graduates. After being trained on the systems and operations of today, they could go off to Nimble Fire to gain insight and experience applying what they've learned to the future.

"It is definitely a challenge to get the right people. The people we need tend to not have the right clearance, and the people with the right clearance don't have the right experience. The Army is unique in that regard, the level of clearance we need typically comes after you have been an operator. I think we need to understand and emphasize as a force, that although most of our planning can be done at a much lower level, the joint platforms we will be working with require a much higher classification level. If we are going to have highly educated operators, we need to fully understand the joint capabilities at all levels," said Barrett.

Currently, Army warfighter participation comes from within the Fires Center of Excellence (Air Defense School, Army Capabilities Manager AAMDC, Fires Battle Lab, etc.). We provide individuals with the requisite skills and backgrounds, but have been removed from current operations while serving in Training and Doctrine Command. Increasing operational force participation brings in individuals who are current in IAMD

operations within a particular theater or area of responsibility (AOR). These individuals provide valid input, and also return to their parent organizations with new insights to inform future IAMD concepts for their respective AORs.

Leaders in our branch should relook the constraints we have related to TS-SCI billets, from the perspective of fully exploiting experimentation. Leaders should consider adding Nimble Fire to their collection of leader development tools, if it is not already, and look for opportunities to send the right people out to get involved (particularly for events pertinent to their respective AORs). Interested leaders, as well as individuals with ADAFCO and PTG backgrounds and TS-SCI security clearances, can reach out to LTC Seth Barrett at seth.e.barrett.mil@mail.mil for more information on Nimble Fire and the upcoming event schedule.

CW3 Kevin Kruthers currently serves as Patriot Top Gun Course Manager and 140K Chief Instructor for the 3rd Battalion, 6th Air Defense Artillery Regiment. He previously served as the Air and Missile Defense Systems Standardization officer for the 10th Army Air and Missile Defense Command at Rhine Ordnance Barracks, Germany.

ADA struggles within the JAGIC

MAJ Danny Lee Rumley Jr.



A Patriot missile launcher from C Battery, 3rd Battalion, 4th Air Defense Artillery deploys during a "Hot Crew" exercise. (Courtesy photo/U.S. Army)

Many of the Army's operations and positions are inherently joint. The statement is even more true for the Air Defense Artillery (ADA) branch. The ADA branch routinely finds itself providing support to strategic and operational level (missions) that incorporates every armed services and warfighting function (WfF). Even individuals under the ADA banner can quickly find themselves attached to joint or coalition teams such as Air Defense Artillery Fire Control Officers (ADAFCOs) in the Combined Air Operations Center (CAOC) or Control and Reporting Center (CRC) or Air Defense Liaisons attached to the Air Force A5. Again, these positions directly support echelons above the tactical, which brings the question of how do Air Defenders integrate their multi-domain operations skill into the tactical fight? One way is through the Joint Air-Ground Integration Cell (JAGIC).

The JAGIC

As stated in ATP 3-91.1/AFTTP 3-2.86, the JAGIC is a modular and scalable center designed to fully integrate and coordinate fires and air operations over and within the division commander's area of operation (AO). The JAGIC collocates decision-making authorities from the land and air components with the highest levels of situational awareness. To do this, the cell must have systems (technology) and people that can bring a specific field's capabilities and apply them across the range of combat operations that the Combined Operations and Intelligence Center (COIC) will utilize. The JAGIC is supposed to be a joint collaborative effort that filters all airspace planning, immediate air support requests, fire missions, collections management, and Army aviation through it for the division. Moreover, with the JAGIC utilizing a third of the space and effort in the COIC, it plays a vital role in the combined arms fight. However, placing different WfF together to perform a task should be more

than a procedural method. Integration requires understanding of collaborative processes (not just knowledge) and an understanding of the joint operating environment. The focus of the JAGIC is not to just clear airspace to allow ground artillery to deliver effects on target but to integrate fires and capabilities, making the sum and effort of these different systems greater than what they could do individually. In short, no one rows alone.

The Army selects personnel to represent fires, air and missile defense, aviation, and airspace elements to contribute to the JOIC. By position, the division chief of fires is supposed to be the senior Army officer within the JAGIC; however, with the conflicting requirements, such as being responsible for allocation of fires assets, development of the scheme of fires and the refinement of target selections, the fires support officer (FSO) leads the coordination, synchronization, and employment integrated with air operations. As stated correctly by U.S. Air Force Col Curtis V. Neal (Ret) and U.S. Marine Corps LtCol Troy Caraway (Ret), "the JAGIC is simply an integrating cell created from Army and Air Force personnel that are already assigned to the division headquarters."

In short, there is no additional staffing given to the JAGIC, and the JAGIC roles do not replace other capabilities such as the Tactical Air Control System, Air Defense Air Space Management/Brigade Aviation Element (ADAM/BAE), or Air Support Operations Center. With the severely limited personnel shortage that ADA faces, should providing resources toward the JAGIC be a focus? How do Air Defenders show their worth and integrate into the division and JAGIC without wasting human resources and talent that leaders can divert other efforts or to Army Air and Missile Defense Command (AAMDC)? To start, within the JAGIC, AMD needs to be combined with intel, protection, and Fires to maximize the assets we have

available and assist in using the correct effects on enemy targets.

AMD's role and integration issues within the JAGIC

The U.S. Army's primary function, as outlined in DoD Directive 5100.1, is to organize, equip and train for the commencement of prompt and sustained land combat operations. With this being the Army's focus, all the Army's support is geared toward allowing the ground troops freedom of maneuver access to maintain ground dominance. The JAGIC is no different; the cell focuses on fires geared towards providing support to ground forces even though the purpose of the cell is to integrate fires across air and land. Due to this, there is a disconnect of each entity's roles in the JAGIC plays, especially when it comes to AMD capabilities. The divisional AMD role is more complex and profound than merely providing an airspace picture. Some of the AMD's purposes in the JAGIC include providing the division with the tactical airspace picture for the assigned operations area, integrating divisional ADA assets into the scheme of maneuver, controlling the AMD fight for the division level and lower, and preventing fratricide by integrating with airspace control at the JAGIC.

AMD personnel still retain their inherent tasks outside of the JAGIC's focus but still enhance JAGIC operations. For example, the AMD personnel will plan sensor coverage locations to match the division commander's priorities and monitors system status, weapon control status and engagement authorities. Additionally, this person will assist intel with understanding enemy Integrated Air Defense Simulation capabilities versus friendly air and assist in the protection plan by aligning divisional ADA assets with the division's prioritize protection list.

The tactical airspace picture feeds into the common operating picture and provides information into the Army Air-Ground Systems and the Theater Air-Ground System, and Tactical Air Control System (TACS), respectively. The AMD section provides an air picture of the Tactical Airspace Integration System (TAIS), which is being managed by G3 Air (150A/15Q). In brigades, the 14G do end up managing both systems for the ADAM/BAE or ADAM Cell. Now AMD is more than capable of helping clear for fire because we have the air picture to help provide the clearance. There are two major systems that AMD operators need for their assigned role within the JAGIC, which are the Air and Missile Defense Workstation (AMDWS) and the Air Defense Systems Integrator (ADSI). AMDWS is the ADA tool that provides situational awareness and air and missile defense plans to other C2 nodes. The common tactical picture is an accurate and complete display of relevant tactical data that enables situational awareness, command and control, and combat identification function. In short, the AMDWS is not just beneficial for the AMD component but provides vital information to any echelon commander, especially division, by connecting them to local and joint agencies. The information includes the visual display of air threats, flight paths, estimated impact points, and point of origins for ballistic missiles, rockets and mortar threats. The AMDWS can be used to plan the best locations for Army Fires (ADA and FA) sensors and shooters.

Additionally, it displays the radar coverage and current airspace control order to enable quick coordination or correlation of fires that will exit the division's airspace. All of these functions are done through data links via the Air Defense Systems Integration (ADSI). The ADSI also ties the maneuver fight into the joint community through the multi-tactical data link architecture to provide joint integration.

The TAIS is the Army's system for air space management and is used to produce the airspace plan for Army organizations. The TAIS allows commanders to fight in the 3rd dimension, synchronizes and deconflict airspace with maneuver, fires, and logistic domains, and enables dynamic airspace updates and battle command convergence. One of the products managed by TAIS is the Unit Airspace Plan (UAP), which represents all the airspace requirements for a particular unit for a period that usually corresponds with the airspace control authorities orders (ACO). The UAP will be sent to the incorporated into the ACO through another Army-specific system. The TAIS speeds up the fires mission by receiving data directly from AFATDS. The TAIS can also receive information from the ADSI and perform similar functions as the AMDWS. The obstacle to AMD integration is that the TAIS is the preferred system by the Army and JAGIC, making one of AMD's most capable integration tools redundant in JAGIC chiefs' eyes. Performing roles more suited for Army-specific operations, the AMDWS is still needed due to the TAIS limitations. For example, the TAIS can view the ATO but depends on the mission-essential pieces of information that may not be available to the operator, such as controlling agency call signs, signatures and routes. The TAIS also requires AMDWS to send it tactical ballistic missile alerts.

The JAGIC must realize that the AMDWS and TAIS have very different functions and are uniquely valuable. AMDWS is key to integrating ADA into the maneuver fight, and these assets have capabilities that extend well above the coordination line, making the old ground versus air concept ineffective.

Even though the AMDWS is very capable, the TAIS overshadows the AMDWS in specific Army environments based on the TAIS's role and the focus of receives in prioritizing Army-centric information. The role of the AMDWS is to provide an

"Air Defense" picture by depicting aircraft, unmanned aerial vehicles and missile tracks. These tracks are more specific to AMD's defensive counterair mission, which has gone ignored by maneuver division commanders since 2005.

Likewise, the AMDWS has been struggling to perform its critical roles in the mission command systems family. Publishing its tracks to the Deployable Disbursing System has been an issue due to map server issues and hardware limitations. Additionally, operators lack knowledge of the functions that AMDWS provides holistically. The disconnect stems from Air Defenders utilizing other tactical systems to obtain information that we are more comfortable using than the AMDWS, such as the Tactical Planning Workstation, that Air Defense battalions use daily for operations.

There can only be one common operating picture, so information is prioritized for the division commander. The commander needs to enter their tactical operations center and quickly understand the situation in order to integrate it immediately into planning for the moment. Introducing more screens or products within the JAGIC to cater to individual WfF, specifically, AMD would make it difficult for the commander to process information. Naturally, information is prioritized to make it easier for ourselves.

The statement is not a direct criticism to these commanders but highlights a severe issue that AMD faces on relevance. When Short-Range Air Defense (SHORAD) left the movement and maneuver divisions in 2005, it was the last touchpoint that many had with the ADA branch. Compounding on being out of sync with movement and maneuver is that ADA Soldiers routinely see 1:1:6 rotation cycles preventing them from developing the relationships with their fires and other combat arms counterparts. However, this does not degrade the extensive role ADA plays in the JAGIC. They help coordinate division-assigned airspace, which

for this article's purpose is a volume of airspace; the airspace control authority (ACA) has delegated the responsibility of control for that volume to the division but executed those delegations given to the JAGIC during large-scale combat operations (LSCO). One issue is that the authorities' delegation will not include powers vested in the area Air Defense commander (AADC). The JAGIC's AMD officer will stay in constant contact with their ADAFCO counterparts to relay information from the CAOC, CRC, or whichever element is acting as the AADC/regional Air Defense commander (RADC) at the time to provide timely and seamless airspace coordination to the division.

Overall, information priorities can shape the perception of importance for AMD members' function within the JAGIC.

Training and knowledge deficiencies

Training and understanding Air Defense's value to the JAGIC does not solely rest on Air Defenders' shoulders but is dependent on the entire force. As mentioned above, Air Defense systems, knowledge and personnel are integral to every warfighting function. However, there seems to be a systematic issue with understanding the role and capabilities ADA brings to the fight.

Failure to understand how to integrate ADA capabilities into division-level cells start with TRADOC. There is a dire disconnect between training and simulation exercises when integrating ADA into LSCO due to scenario designers, observers, trainers and coaches not knowing what Air Defense is. It is safe to say that when it comes to defending against short-range and medium-range ballistic missiles —, every Army leader innately knows Patriot is the weapon system needed and at that point quickly recognizes that Patriot is

necessary for the planning process. However, that is the extent of most DoD members' knowledge of Air Defense. Admittedly, this is not the fault of anyone but probably stems from the unique and singular role that Air Defense, specifically the Patriot missile defense system, played in the Gulf War of 1991. Nevertheless, now, being decades removed and with the shift in defense strategy back to focusing on peer-on-peer conflicts, it is time to recognize ADA's versatility and vitality.

First, the U.S. Army Combined Arms Center (CAC) must incorporate all Army WfF and branches in doctrine and training regarding combined arms operations. The CAC is the force modernization proponent for nearly every Army operation to include unified land operations, combined arms operations, and UAP interoperability. Additionally, the CAC is also the Army's chief doctrine, training, education, force integration, and more. In short, if there is a change that needs to occur in the Army, it will begin and end at the CAC. Not to mention that the CAC oversees all Fires Centers of Excellence and non-branch-specific schooling for the Army, which means that the grasp and impact of the CAC's directives directly impact FORSCOM implications.

Unfortunately, two significant unities that fall under the CAC -- the Mission Command Training Program and the Command and General Staff Officer College, have continuously had a hand wave approach to implementing air and missile defense into their training scenarios. The lack of incorporation is extended to every Army division and corps that attends a warfighter exercise and the top 50% of an entire Army's newly promoted field grade officers. The scenario is severe because division commanders who will be leading the fight against peer threats, such as Russia, will not understand how to employ or utilize the Air Defense assets assigned to them. Likewise, there will be no hope for younger armor and infantry of-

ficers leaving the schoolhouse to take any profound insight about ADA back to their units since it is grossly misrepresented and misunderstood in schoolhouse training scenarios.

The question could be why Air Defenders assigned to these division headquarters do not act as the subject matter expert and forcefully integrate themselves into the fight. Commanders do not know what they do not know, and the entire reason for the cells like the JAGIC and ADAM is to inform the commander quickly, right? True, but this is harder for Air Defenders than it seems. One vignette describes how the Fires chief only wanted to use their systems for planning. For example, Field Artillery doctrine requires the movement of launchers after firing a certain number of rounds. The criteria increases the survivability of their launchers from counter-attack. AMD provides the ability to see missile launches and predict impact points; thus, offering detailed information to the Fires chief on missile launch, location and time left for dispersion until impact at the predicted location. The neglect of utilizing AMD to increase the survivability of FA launchers shows the dismay for AMD systems. Integration of AMD systems into the planning process benefits all, if the ADA Soldier is proficient.

One issue is the lack of proficiency of ADA Soldiers on their assigned equipment while being sent to the JAGIC. AMDWS 7.0.1.0 has been released, and units send people to receive training on the new equipment and software. With the lack of practical use, Soldiers who are sent to War Fighter Exercise do not know how to utilize the new software to its full potential. These Soldiers eventually revert to supporting their fire's counterpart on the TAIS not because the AMDWS is useless but because Soldiers are unfamiliar with its function.

Another issue is the lack of integration of AMD across all WfF within the JAGIC. The issue probably stems from the "traditional"

mission for ADA versus its Army-specific function. As mentioned, most DoD members recognize ADA for their joint protection function or defensive counterair role. Army AMD provides the preponderance of active air and ballistic missile defense within the defensive counterair construct along with early warning and detection capabilities. These functions are done within AAMDC through brigade and battalion elements. Contrarily, the Army's primary touchpoint with ADA is through divisional artillery or ADAM/BAE cells attached to units. If utilized correctly, ADA can seamlessly integrate into intelligence, protection, Fires and movement and maneuver planning. However, with the perception that ADA can only provide missile and air defense and with the U.S. having air superiority in conflicts since WWII, there has been a lack of air threats to U.S. forces, diminishing the need for divisional level Air Defense SHORAD. The lack of air threats contributed to the phasing out of Avenger/Stinger teams tasked to organize within Army divisions, unlike ADA Patriot and THAAD units.

The way forward

- How do we achieve integration of AMD?

Moving forward, everyone must understand AMD across all WfF in the JAGIC while realizing that the primary function is Fires. However, the fires' function integrates division Fires with other complementary and reinforcing processing to achieve air-ground operations. AMD can no longer be an afterthought within Warfighting Exercises, the National Training Center and the CAC.

JAGIC leads must recognize how maneuver control measures, fire support coordination measures, and airspace coordinating measures support the operations'

concept, facilitating effective joint air-ground integration and joint Fires. Additionally, they must understand what authorities are delegated from the joint force commander to the joint force air component commander/ACA and down to the JAGIC if permissible. Meaning to have the coordination of Fires quickly, the JAGIC must know whom to coordinate with within the joint environment, which can be done by leveraging their AMD personnel and equipment. Likewise, AMD personnel must continue to be trained to be the JAGICs and AAMDCs quick knowledge access on the airspace control measures and help commanders understand the delineations between these measures, such as the coordination altitude and coordination level by a phase of the operation. Because if given authority, the JAGIC integrates division-level Army tactical AMD systems per the area Air Defense plan, enabling direct coordination with the RADC and, or sector Air Defense commander.

Lastly, ADA Soldiers must become even more proficient than they already are. ADA Soldiers are highly skilled and routinely display a graduate-level of technical and tactical prowess. The ADA Fires Center of Excellence hosts schools like Patriot Top Gun, Master Gunner and ADAFCO schools that produce expert Air Defense planners and tacticians. Additionally, Air Defense Soldiers routinely support joint training exercises or are liaisons to outside organizations. The foundation and capability of Air Defense Soldiers are there, but training must be tailored toward Army divisions while keeping the knowledge of the joint environment.

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quarters and Headquarters Battery commands, and Air Defense Artillery Fire Control Officer/Air Defense Liaison time where he coordinated AMD operations throughout the CENTCOM AO. Rumley is currently completing a Doctor of Management with a concentration on Global Leadership.

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BUILDING COHESIVE TEAMS ON THE KOREAN PENINSULA DURING THE COVID-19 ERA

1LT Avik-Ul Alam

HOW principles from the “This is my Squad” campaign are critical to junior leaders’ success in meeting readiness requirements while facing obstacles brought by a global pandemic.

Camp Humphreys, Republic of Korea

“Corporal, can’t this part wait until tomorrow? It’s 2100 now and by the time we’re finished, it’ll be midnight,” said a Soldier in CPL John You’s squad.

As a junior leader in Chosen Battery, 6th Battalion, 52nd Air Defense Artillery, CPL You has been indoctrinated in the United States Forces Korea’s “*Fight Tonight!*” mantra. Being an NCO serving in the squad leader-equivalent position in a Patriot battery, CPL You is responsible for the training of all the Air Defense Soldiers in his squad and maintenance for its equipment. However, a problem many leaders like CPL You face is the delicate balance of sustaining unit cohesion and the fulfillment of the mission.

In Korea, the obstacle almost all units face is the high Soldier turnover due to the one-year tour. As unaccompanied personnel make an overwhelming majority of the force on the peninsula, this re-occurring loss of talent creates a persistent hindrance on sustaining readiness in Air Defense units. A lesser-known effect from this phenomena is the challenge of creating a lasting identity and culture within the smaller echelon units.

SMA Michael A. Grinston’s “This is My Squad” initiative emphasizes the importance of building cohesion within teams which yield greater success. SMA Grin-

ston highlights that the overarching theme within cohesive teams is ownership. A major component of that ownership is reflected on how the organization receives new team members.

“A lot of Soldiers and leaders who arrive to their formations in Korea find that there is lack of buy-in within the units,” says 1SG Jacob Hardy, Chosen Battery. “Truthfully, for a lot of first-term Soldiers we receive, it is difficult for them to obtain a pristine degree of ownership for a unit that only requires a year-long tour. The effects of COVID-19 exasperates the issue where these young Soldiers long for their families and friends back home.”

The enduring situation posed by the virus makes it even harder for leaders to utilize their resources and personnel to accomplish the mission. Social distancing, quarantine, telework and travel restrictions are some of the few factors that have to be incorporated, which make the planning process more cumbersome.

“Due to these constraints, it is critical for junior leaders to be involved and know what’s going on in the lives of their Soldiers,” said Hardy. “In these unprecedented and complex times brought by the pandemic, the ‘caring’ factor from the leader side of the business is essential in a well-functioning organization.”

As his battery’s Morale, Welfare and Recreation (MWR) representative, CPL You has a strong understanding of the shared hardship stemming from COVID-19 that his Soldiers go through. He focuses on ensuring Soldiers will not only grow closer on those long and tough days but also on the off days where they can enjoy themselves at activities offered by MWR.

“We live, eat and train together,” said You.

“Our mission here is important, but these demands tend to create a stress on the Soldiers which is made worse from COVID-19. It’s important as a leader to not only emphasize the importance of the mission, but also demonstrate that we care,” he said. “Sometimes it is necessary to pause and do mental health checks and more importantly, know when time off is needed. I do my best to ensure every Soldier in the battery is aware of fun opportunities they can do with MWR.”

When Soldiers see that leaders care and go out of their way to provide those opportunities, you start seeing a shift in culture. Cohesion is being forged.

1LT Avik-Ul Alam is an Air Defense Artillery officer currently assigned as the executive officer for C Battery, 6-52nd ADA in Camp Humphreys, Republic of Korea. His prior experience includes being a launcher platoon leader in the same organization.



From left to right, COL Matthew W. Dalton, 38th Air Defense Artillery Brigade commander; BG Mark A. Holler, commanding general, 94th Army Air and Missile Defense Command; and CSM Neil H. Sartain, 94th AAMDC senior enlisted advisor; lead a division-level training meeting at Sagami General Depot prior to the commencement of the Combined Command Post Training, March 2. The 38th ADA participated with 94th AAMDC CCPT for the first time to rehearse aspects of planning, intelligence and execution of defense plans through an intense two-week training period at Yokota Air Base. (SGT Raquel Birk/U.S. Army)

Practice makes perfect

38th ADA proves ready to defend

SGT Raquel Birk

The 38th Air Defense Artillery Brigade completed its first Combined Command Post Training (CCPT) March 12. Commanders and staff had to become proficient in all aspects of planning, intelligence, and execution of war plans to defend Japan from ballistic missile attack through a two-week training period.

“The CCPT was the first time our unit worked with the 5th Air Force at their headquarters to establish connectivity with our higher

headquarters, the 94th Army Air and Missile Defense Command located at Hickam Air Base, Hawaii, the 35th Air Defense Artillery Brigade in the Republic of Korea, and E-3 Air Defense Artillery, our THAAD [Terminal High Altitude Air Defense] unit in Guam,” said CW2 Keon Ellison, command and control systems integrator, 38th ADA. “It’s a great start to a joint partnership that will continue when our Air Defense Artillery Fire Control Officers work with the 5th

Air Force more regularly to conduct multi-domain operations.”

The CCPT was successful in three major areas: promoting readiness, ensuring the ability to fight amid the COVID-19 pandemic, and protecting the integrity of the war-time operational control transition process from the brigade commander to the commanding general of the 94th Army Air and Missile Defense Command.

“Being able to simulate real-time events is a great way to

test our response capabilities, and our ability to communicate on bilateral networks,” said COL Matthew W. Dalton, commander, 38th ADA. “Training like this is essential to the warfighting readiness of the brigade headquarters and the readiness of our Soldiers during real-world conflict.”

Although the training itself is classified and the public does not have access to the results, the use of complex computer simulations — based on a variety of contingencies — provided the necessary training environment to prepare for defending the Indo-Pacific region from an attack by adversaries and provides the foundation for readiness until upcoming IN-DOPACOM training exercise Pacific Sentry.

“The goal of these exercises is to create a shared understanding be-

tween ourselves and our Joint and bilateral partners,” said CPT Matthew M. Stidham, operations officer, 38th ADA. “Being able to bring all parties together in these large-scale exercises is no easy task, but through the diligent effort of our staff and subordinate units, we are able to ensure the security of Japan and our homeland is constantly maintained.”

The result of this exercise ensured the ability of 94th AAMDC units to effectively and mutually respond to a regional crisis that would have a direct impact on the Indo-Pacific region, said Ellison. The training process will continue, and all 94th AAMDC units continue to serve the interests of the U.S. and their allies through sustained training.

SGT Raquel Birk is currently the public affairs noncommissioned offi-

cer for 38th Air Defense Artillery Brigade at Sagami General Depot, Japan. She previously served as command information manager for 2nd Infantry Division/ROK-U.S. Combined Division at Camp Humphreys, Republic of Korea. She received a Master of Arts in Sociology from St. John's University, Jamaica, New York.

The 38th Air Defense Artillery Brigade work with 5th Air Force at their headquarters building to establish communications for the Combined Command Post Training, March 2. The 38th ADA participated in a 94th Army Air and Missile Defense Command CCPT for the first time to rehearse aspects of planning, intelligence and execution of defense plans through a two-week training period. (SGT Raquel Birk/U.S. Army)



Operation Another One Bites the Dust

1LT Carla Dutt



Opposite page: SPC Hunter Girdner connects coaxial cables to establish communication via the Antenna Mast Group. (1LT Carla Dutt/U.S. Army)

The 5th Battalion, 52nd Air Defense Artillery Regiment, recently demonstrated their tactical and expeditionary capabilities by conducting their Air Defense Gunnery Table VIII certifications while deployed to USCENTCOM and sustaining the defense for the areas of responsibility most critical assets, during the COVID-19 pandemic. The Bravo Battery *Bulldawgs*, deployed to Al Dhafra Air Base, United Arab Emirates, seized the opportunity with Operation Another One Bites the Dust, and certified with a first time “GO.”

In order to operate the Patriot system, a surface-to-air missile system that utilizes advanced aerial interceptors and a high-performance radar system, Bravo Battery’s crew members must maintain a Gunnery Table VIII certification. For several weeks, the Soldiers, NCOs and officers of Bravo Battery demonstrated their expertise, experience and skillsets in conducting crew drills aligned with the battery check ride program. Squad leaders, platoon sergeants and battery trainers methodically trained the fundamentals of Air and Missile Defense and individual Soldier tasks, while also enforcing social distancing during mobility crew drills. This effort also helped reinforce trust within the unit,

as the first-line leaders skillfully demonstrated their ability to train their subordinates.

As the *Bulldawgs* steadily advanced from individual to collective training, they successfully maintained all of their mission requirements and support to the defense of their assigned critical asset. In order to certify as a Table VIII battery, the Soldiers must collaborate and pass multiple tasks to include march order and emplacement drills. It requires many moving pieces of equipment and personnel. The certification process also includes conducting a convoy to an alternate site that the battery reconnaissance team surveys before emplacement. Once the crews have emplaced their equipment,

1LT James Holland briefs his mobility crew on the route to the alternate battle position for Bravo’s Table VIII certification. (1LT Carla Dutt/U.S. Army)





1LT James Holland and SPC Kaci Davis prepare the Engagement Control Station for mission capability at the alternate battle position during Table VIII certification. (1LT Carla Dutt/U.S. Army)

they will assume their battle positions and ensure the launchers are operational and can communicate with the engagement control station.

“I think it was truly impressive for the battery to achieve our Table VIII certifications while still fulfilling our AMD mission while deployed,” said SPC Filbert Sandoval, a battery command post operator, Bravo Battery.

Along with obtaining the battery gunnery certification, Operation Another One Bites the Dust also provided an opportunity to execute a short-notice survivability move and validate an additional alternate battle position. Exercising the battery’s expeditionary capabilities provide the flexibility needed to fight in today’s complex

operational environment. The key takeaway from this operation was improving crew proficiency, building expeditionary capability and maintaining combat power, while still accomplishing the battery’s assigned mission. The success that the battery demonstrated toward the end of their deployment serves as a testament to the Soldier’s professionalism and dedication to the mission.

“A Patriot fire unit’s ability to quickly relocate and resume the defense is a key element in defeating the air and missile threats that will specifically target our systems,” said CPT Michael Felton, commander, Bravo Battery, 5-52nd ADA Battalion. “Opportunities like this ensure that the

team retains its focus on tactical movements and proficiency.”

1LT Carla Dutt, Bravo Battery Bulldogs, is from Easton, Pennsylvania, and she received her commission from East Stroudsburg University in 2017.

Large-Scale Combat Operations

CPT Oren Rosen

Large-scale combat operations (LSCO) are inherently sophisticated as they “require the execution of multiple tasks synchronized and converged across multiple domains to create opportunities to destroy, dislocate, disintegrate, and isolate enemy forces.” Unfortunately, the last time the U.S. Army conducted operations on a similar scale to LSCO was the 2003 invasion of Iraq. Since then, the Army has been almost exclusively training for and conducting counter-insurgency operations (COIN) in Iraq, Afghanistan and other global locations. Within the Air Defense Branch, we have predominantly been deployed to static, well-established sites in the United States Central Command and the United States Indo-Pacific Command theaters. However, the 2018 National Defense Strategy stated that “long-term strategic competitions with China and Russia are the principle priorities for the Department of



A Patriot missile is deployed from a German Air Force AMD Wing 1 patriot launcher assigned to B Squadron on Nov. 23, 2020, at the NATO Missile Firing Installation during the NAMFI 20 live fire. (SGT Vincent Wilson/U.S. Army)

Defense,” shifting the Army’s training strategy from COIN, toward training for a near-peer fight. To remain aligned with this strategy, the Air Defense Branch must take deliberate steps to focus unit training on preparing for the complexities of LSCO. First, Air Defense brigades and battalions must drive unit training plans towards training for LSCO by conducting LSCO-focused Military Decision-Making Process (MDMP) exercises and integrating Air Defense formations into maneuver centric- Combat Training Center (CTC)-like exercises. Second, Air Defense batteries must train their formations to operate in a contested or non-permissible operational environment. Last, the total Air Defense enterprise must drive the necessary shift in the branch’s training culture to ensure lasting change and encourage innovative thinking.

Setting the scene

Two officers sit huddled together around a large map covering a piece of plywood. The map, displaying the entire joint operations area (JOA) of Lithuania, Latvia and parts of Estonia, was covered with friendly and enemy unit icons. The map needed to be updated to help the brigade staff visualize where the units were possibly moving to. Hunched over, their faces twisted deep in thought, the officers rapidly point to the various icons and jabber incessantly at each other. Suddenly, the tent flap opens and the chill of the early morning air blows into the already frigid tent, jolting them back to their senses. The brigade S3 arrives with guidance on how to defend the Combined Joint Task Force Commander’s (CJTF-CDRs) critical assets.

This vignette happened. It happened on Fort Bragg, North Carolina, in the 108th Air Defense Artillery (ADA) Brigade’s Tactical Operations Center tent on the morning of March 5, 2021. CPT Allen Copas and I, the 108th ADA Brigade’s Future Operations Cell planners, poured over an analog

map of the exercise JOA and discussed how the brigade was going to deploy its subordinate units to defend the CJTF-CDR’s critical assets. We did not receive specific professional military training on how to plan for an Air Defense brigade to be spread out over hundreds of kilometers, in a decisive action training event-Europe environment, and in support of the land component commander’s fight against a hostile joint force. Rather, our training was “on the job.” It came in the form of preparing for and executing the MDMP for the brigade’s command post exercise (CPX).

Preparing for the fight - brigades and battalions

For the necessary training culture shift to occur in the Air Defense Branch, brigade and battalion commanders must drive their unit training plans toward training to combat a near-peer adversary. According to FM 3-0, *Operations*, Army units must train under conditions “that portray real threat capabilities in ways that stress units and leaders for the realities of large-scale combat operations.” To this end, battalion and higher-level echelon training should come in two distinct forms: LSCO-based MDMP exercises and CTC-like culminating training events (CTE).

Brigade and battalion staffs are like muscles, they have to be consistently exercised otherwise they will atrophy. As such, brigade and battalion staffs should deliberately incorporate LSCO staff exercises (STAFFEXs) and CPXs into their unit training plans. A sample brigade training plan may look like the following using the crawl, walk, run methodology. The crawl phase is a three-day STAFFEX for the last week of January to familiarize the brigade staff with the exercise operational area and “knock the rust off” of how to perform the MDMP. The walk phase is a 10-day

CPX in March to perform the entire MDMP, given changes to the exercise operational environment and the addition of external exercise support. Lastly, the run phase is a 10 to 12 day CTE in May to certify the brigade headquarters to assume the FORSCOM Contingency Response Force mission in late June or early July. Key to the successful execution of each of these training events is the development of a robust training scenario, using the resources and expertise of the unit’s higher headquarters, and the participation of all staff elements in the planning and execution of the training.

Additionally, sufficient time must be allocated for exercise execution. For example, based on the steps of the MDMP from FM 6-0, *Commander and Staff Organization and Operations*, a minimum of 10 days should be allocated to a CPX’s execution. The importance of time allocation is two-fold. One, it forces the staff to synchronize the exercise timeline with the commander’s schedule. This synchronization drives the staff to produce tangible deliverables to the commander (ex: a full mission analysis brief). The commander’s guidance and input are vital during the MDMP, and therefore, to the successful execution of the training event. Furthermore, commanders are responsible for assessing the training of their units. If the commander is not present during the training to receive briefs or other products, they cannot assess the unit’s training readiness.

Two, a minimum of 10 days allows the staff to properly go through each step of the MDMP, including a full war-game session and a Course of Action (COA) Decision Brief. A thorough war-game session with all staff primaries and non-commissioned officers in charge in attendance will: 1) enhance shared understanding about the COAs being developed, 2) reveal any glaring holes in the plan, and 3) produce the decision support matrix (with identified branch plans or sequels). During the March 2021, 108th ADA brigade

CPX, the brigade staff conducted a war-game session lasting an entire day. As part of the war-game session, the staff identified that the friendly maneuver supporting effort (SE) attack was likely to be perceived as the main effort attack by the hostile forces. The staff had not originally planned for additional air defense assets to be placed with this unit. Thus, during the wargame, the S2 concentrated enemy rotary wing/fixed wing and ballistic missile attacks on this force. Subsequently, the S3 shop modified the plan and incorporated additional air defense assets to provide coverage of the friendly SE. While this is a small example, it illustrates the necessity of going through the full MDMP during a LSCO scenario. Without this war-game session, it is unlikely that the staff would have detected this flaw in the COA.

It is also imperative that ADA brigades and battalions continue to work with their host installations and with the Army Air and Missile Defense Command (AAMDC) to participate in large-scale CTC-like CTEs. These field exercises take the theory of the staff work done during STAFFEXs and CPXs and applies it to real-world scenarios. During Roving Sands 2019, held at Fort Bliss, Texas, several battalions (1st Battalion, 7th Air Defense Artillery, 3rd Regiment, 4th Air Defense Artillery, and 4th Battalion, 5th Air Defense Artillery), one brigade headquarters (108th ADA Brigade) and the 32nd AAMDC participated. The exercise simulated a U.S. Army Corps maneuvering in a large-scale combat operation with notional subordinate maneuver units. During the first few days of the exercise, Air Defense units were frequently failing to link up with the Texas National Guard sustainment battalion that was providing support to the brigade and failing to adequately secure their sites from opposing force attack. Observer/controller teams provided feedback to the units during the exercise and a mid-point after-action review offered sober visuals to illustrate

unit shortfalls. The units had to stumble a bit to fully comprehend which tactics, techniques, and procedures (TTPs) they needed to refine within their organizations. During the second half of the exercise, many of the first half problems and failings disappeared. Every battery and battalion made their movement times and significant improvements were made to site security procedures. CTC-like training events are ideal to “stress units and leaders for the realities of large-scale combat operations” because of their geographic scope and ability to integrate numerous non-Air Defense units into the exercise. Staffs are forced outside their comfort zones and must re-evaluate long-standing assumptions about logistics, communications and operations.

Air Defense unit integration into existing maneuver unit home-station training events is also vital for bringing Air Defense and non-Air Defense units together to train and rebuild relationships. For example, the 1st Armored Division hosts an annual division exercise, Iron Focus. During my three years stationed at Fort Bliss, I never saw, nor heard of, an 11th ADA Brigade unit participate in this exercise or any of its equivalents. Those years were missed opportunities for all Fort Bliss tenant units to train together and learn each other’s mission sets and operational and sustainment requirements. Thankfully, 32nd AAMDC and the 11th ADA Brigade have both recognized the missed opportunities of the past. They have begun coordination with the 1st AD to incorporate Air Defense units into 1st AD exercises soon. Other Air Defense brigades should look for similar opportunities at their home-stations.

Alone and unafraid - the battery

According to FM 3-01, *U.S. Army Air and Missile Defense Operations*, ADA formations will operate in one of two mission sets: 1) support

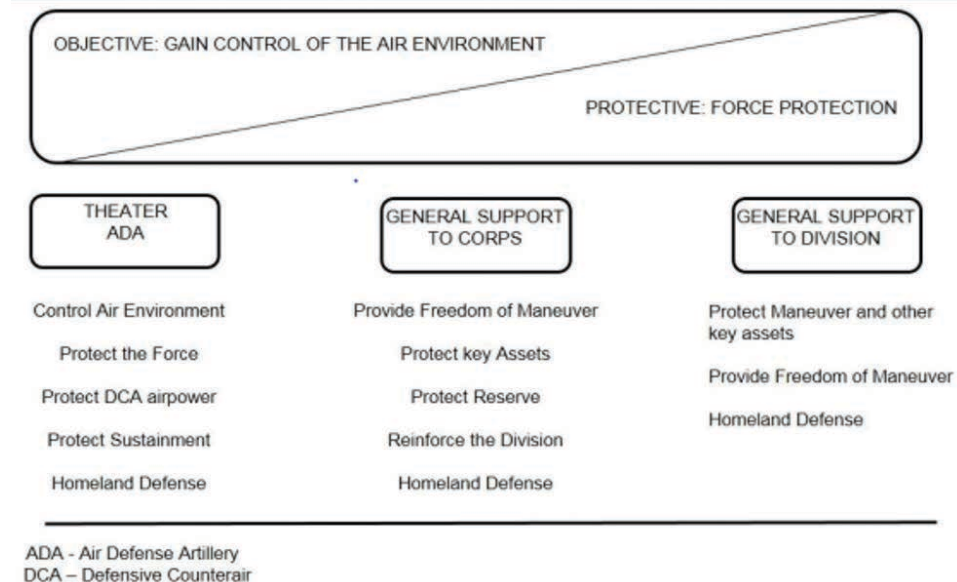
to joint air and missile defense or 2) support to unified land operations. Therefore, the ADA battery must be ready to both defend a fixed asset in the relative security of the joint support area and move around the battlefield in conjunction with friendly maneuver forces. In the future non-permissible or contested operational environment, Air Defense Soldiers must have proficiency in both their Air Defense tasks and common Soldier tasks to preserve their own combat power and ability to accomplish their assigned Air Defense missions.

First, company-grade officers need to empower their NCOs and Soldiers to maximize existing training opportunities and concurrently train common Soldier tasks. For example, a battery is conducting launcher mobility and missile reload training in the vicinity of the McGregor Range Complex at Fort Bliss. During the battery training meeting, the battery commander reviews the common Soldier tasks that she would like to be trained during the quarter. The battery first sergeant, launcher platoon sergeant (PSG), and launcher platoon leader (PL) begin initial coordination to identify which common Soldier tasks can be concurrently trained. They identify that land navigation, mounted and dismounted battle drills, and convoy operations can be concurrently trained. The PSG identifies the NCOs that will serve as trainers and observers for the identified tasks and conducts a site reconnaissance with the PL to determine the training space. Six weeks later, four new launcher crews are certified, and 20 Soldiers conducted dismounted battle drills training. The commander assesses both training events and the information is documented in the Digital Training Management System.

In the near-peer adversary fight of LSCO, jamming, other forms of electronic warfare (EW), and the tyranny of distance will all degrade or neutralize friendly telecommunication networks and

systems. Hostile special purpose forces may employ portable UHF/VHF jamming technology to degrade our systems or advanced hostile anti-satellite capabilities may destroy or neutralize our satellites. The equipment we use to conduct equipment emplacement, navigation, and command and control are vulnerable to these attacks. Given this possible reality, battery Air Defense training plans must incorporate how to operate in a degraded operational environment. First, Soldiers must be rigorously trained and evaluated on the use of analogue systems. During gunnery, NCOs must train their Soldiers on the proper use of aiming circles and gunner's quadrants for equipment and sensor emplacement. These techniques do not rely on electronic equipment and will not be degraded by hostile EW effects. They preserve the unit's ability to assume its Air Defense mission, even under contested conditions. Additionally, officers, NCOs, and Soldiers must train to read a map, use it to conduct mounted and dismounted navigation, and determine equipment emplacement coordinates. The DAGRs we use for emplacement and navigation are susceptible to hostile EW effects and cannot be relied upon in LSCO. These analogue training techniques will allow Air Defenders to perform their Air Defense missions regardless of the operational environment.

Second, the fratricide incidents of 2003 caused the Air Defense Branch to re-examine its existing engagement operations TTPs. While subsequent updates and the addition of safety protocols were well-intentioned, there has been one glaring, negative consequence. The Air Defense Branch's reluctance to train Patriot batteries on conducting autonomous or independent engagement operations. As previously stated, communication in a large-scale combat operational environment is likely to suffer from both hostile EW effects and the tyranny of distance between Air Defense units.



ATP 3-01.7: Air Defense Artillery Brigade Operations, pg 2-3 (16MAR2016). (Courtesy illustration)

Therefore, to be best prepared for LSCO, ADA batteries and battalion information coordination centers (ICC) must train for conducting independent and autonomous engagement operations.

As a tactical control officer (TCO) in 2017, I faced a common "communications loss" Table VIII air battle scenario. During the air battle, the battery command post and Engagement Control Station would lose all forms of communication with the ICC and tactical command system. I was taught to simply 1) notice that communications had been lost with the higher echelon and 2) notify the battery commander of the loss in communications. After several minutes, communication would be restored, and the air battle would proceed. The Air Defense Branch needs to stop pretending that autonomous or independent engagements will not be possible during LSCO. These engagement operations are inherently high "risk to force" situations and better training techniques will help to mitigate this risk. First, greater emphasis should be placed on the battalion S2 and S3 shops working together to build out a scenario with realistic threats. Scenarios could be published to the batteries in the form of weekly intelligence

updates and would reflect changes in the "operational environment" as the unit progresses through its training cycle. Leaders would learn how to analyze the intelligence and interpret whether to adjust their system postures, defense designs and site locations.

Second, Air Defense engagement operations during LSCO will carry enormous risks to mission and to force. The air battles must assess battery leaders' understanding of battery-level engagement and identification authorities to ensure training proficiency and understanding. For example, an unknown track is detected and is not flying in an approved air corridor during Air Defense warning red. Communications have been lost with the ICC and adjacent fire units are out of communication range. However, the track's flight characteristics show that it is flying in a way that mimics friendly "in distress" flight patterns. The TCO should consult with the battery commander and together they would need to quickly determine if this track is something they can engage or not. Both officers would be evaluated on how well they could defend their decisions, given battery and battalion SOPs. We must train to operate in a non-permissible environment

here in the U.S., rather than wait until we are on the plains of Eastern Europe.

Request for forces! - The ADA Enterprise

According to ADP 6-22, *Army Leadership and the Profession*, culture “consists of shared attitudes, values, goals, and practices that characterize the larger institution over time.” In the Air Defense Branch, we have become trapped in a “CENTCOM” culture mindset, influenced by nearly 20 years of constant rotations into and out of hardened sites. The Air Defense Enterprise must take an active role in ensuring unit training plans are aligned with the rest of the Army and focused on training for LSCO. As they possess the most influence, senior Air Defense officers and NCOs must assist with and drive, the reshaping of the training culture.

First, the Air Defense Branch should convene a series of LSCO conferences with joint partners to discuss how their units will operate in a future large-scale fight. These conferences would bring together representatives from all of the future air space users and owners: Army Fires, Army aviation, Army maneuver formations, Navy aviation, Air Force, and Marine Corps aviation. The conferences would cover a range of topics, but I propose three specific subjects:

1. A deliberate review of established TTPs for air space coordination and deconfliction of Fires. Existing doctrine must be evaluated using a Doctrine, Organization, Training, Materiel, Leader Development, Personnel and Facilities approach to ensure roles and responsibilities are clearly delineated during LSCO. If the doctrine does not exist, then it needs to be created or updated.
2. The conference should review current operation plans, update them as necessary, and clarify

force requirements and command/support relationships.

3. From an Army air defense-specific perspective, the conference should generate tangible products that can be presented to Headquarters-Department of the Army to address possible modification table of organization and equipment changes, such as assigning a brigade support battalion to each Air Defense brigade.

Second, while our senior leaders help shape strategic level decisions, it is the young captains and young NCOs that remain at the forefront of a conflict. The Air Defense professional military education (PME) pipeline must prepare our leaders for LSCO. For example, the Captains' Career Course should incorporate conversations and practical exercises about high “risk to force” events in LSCO, such as autonomous engagement operations. This way, the branch encourages divergent thinking and introduces captains to operating in a LSCO fight. NCO PME, such as Advanced Leaders Course, should incorporate instruction and review of training techniques for manual equipment emplacement and other essential Air Defense LSCO tasks. NCOs are the primary trainers of individuals, small teams and crews and their PME must mirror the change in unit training.

Third, the branch's senior leaders must take an active role in shaping and promoting the culture change. It is their responsibility to mentor the next cohort of Air Defense senior leaders and encourage the creative and dynamic thinking that will allow the branch to be successful on the battlefields of tomorrow. “This is how we have always done it” is not going to cut it.

Last, and most crucially, our Air Defense flag officers must speak in one voice to the Army and joint community. Our general officers must continue to work together to shape Army Staff and Joint Staff-level decisions that affect ADA deployments and priorities. Training for LSCO is purely theo-

retical if we are stuck in the CENTCOM sand every other year.

Conclusion

The Air Defense Branch must undergo significant changes to how it trains to be prepared for LSCO. The ADA brigade and battalion staffs are important spaces for developing and refining TTPs and resourcing battery training. The ADA batteries are the tip of the spear for ensuring unit training is incorporating common Soldier tasks and air defense tasks. Lastly, the Army Air Defense Enterprise must come together with the larger Department of Defense community to shape the future of air defense training. These are only several proposals for unit training. These methods are not the complete solution, nor are they going to be painless to implement. Rather, it is going to require a coordinated and sustained effort by Air Defense NCOs, warrant officers, and officers, with the support of our maneuver brothers and sisters, to be able to change our branch's culture and prepare for LSCO. It is worth the time and effort to solve this problem set now, rather than waiting to solve it in a tent, huddled around a map, somewhere in the frozen tundra of the Baltics.

CPT Oren M Rosen graduated from the University of California, Los Angeles, and commissioned into the Air Defense Artillery in 2016. He is a graduate of the Air Defense Artillery Basic Officer Leader Course and the Air Defense Artillery Captains' Career Course. Rosen currently serves as the battery commander of C battery, 3rd Battalion, 4th Air Defense Artillery Regiment.

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Guardian Battalion response to COVID-19

CPT Eric S. Warren

In February 2020, the southern tip of the Korean Peninsula became the epicenter of the global COVID-19 pandemic. The 2nd Battalion, 1st Air Defense Artillery was one of the first battalions in the U.S. Army to respond to the crisis. The battalion was in a unique position, as its brigade headquarters is located in a separate garrison several hundred miles away. Despite this, 2-1st ADA Battalion was able to effectively and efficiently overcome the crisis and the constraints it imposed, protect the force and maintain operational readiness.

Patient 31

The battalion's most challenging time period centered around an incident involving patient 31 (one of the first patients to test positive). Patient 31 had been to multiple locations prior to testing positive, including the Camp Walker PX and gas station. This occurred at the same time that Daegu, South Korea, (where Camp Walker is located) was experiencing the world's largest COVID-19 outbreak outside mainland China. This was also before we had the tests or contact tracing system that exists today. In response, anyone who had been to either the PX or gas station was command-directed to stay home and self-monitor symptoms for two weeks. This applied to over 100 people, including most key leaders (the battalion commander, battalion executive officer (XO), command sergeant major, and numerous battery-level leaders). The S3 became the only field grade physically in the battalion. Most battery command teams had two out of three of their top

leaders affected. The 2-1st ADA's HHB had its commander, XO, and first sergeant affected simultaneously. This situation created numerous challenges.

What were our challenges?

Communication. Since 2-1st ADA's parent brigade was located so far away, Eighth Army quickly directed tactical control of 2-1st ADA to 19th Expeditionary Support Command (19th ESC) for the purposes of COVID-19 reporting and management. One of the biggest challenges in the beginning was taking all the information from both 35th Air Defense Artillery Brigade and 19th ESC and synthesizing it into one operation order. At one point, 19th ESC was producing a new fragmentary order every day, sometimes two. The 2-1st ADA had to integrate that information with the information provided by our brigade, while sorting through what quickly became hundreds of attachments from two separate commands with separate numbering systems, and then get that information to the batteries quickly enough that they could disseminate it to the lowest level. Meanwhile the battery command teams were not allowed to hold formations and were without all of the telework capabilities that we have now.

It quickly became apparent that 2-1st ADA needed a more direct method of reaching out to Soldiers. The battalion began holding regular Facebook live town halls where the battalion command team would discuss HPCON restrictions, the stop move and many

other topics. The battalion also utilized infographics to synthesize a large amount of information into a single image. Additionally, 2-1st ADA drastically expanded the use of virtual private networks (VPNs). This software enabled personnel to access their unit's network and share drive from any location. The 2-1st ADA also held a COVID-19 commander's update brief with 19th ESC seven days a week.

Response. 24/7 operations, patient trackers, and clean teams are the first three things that come to mind in regard to 2-1st ADA's response to COVID-19. The battalion's battle staff was divided into three eight-hour shifts working seven days a week in order to operationalize the COVID-19 response effort. The response team included members of the staff from all sections. The S3 shop took the lead in overseeing response operations. Members of the S1 section moved into the S3 shop in order to provide immediate access to administrative data as soon as an individual was affected, enabling rapid updates to the battalion's patient tracker. The battalion S4 assisted the battalion physician's assistant (PA) in obtaining the personal protective equipment (PPE) necessary to support operations, while the S6 team worked constantly to establish VPNs for as many people as possible. Additionally, our battalion PA worked tirelessly providing medical support and providing expertise to the S3 section to ensure that the battalion's operational response and practices were aligned with medical guidelines. There was also a great deal of work done at the battery level to establish clean teams

capable of responding to COVID-19 incidents.

Movement. Movement of people became extremely challenging. Even with the stop move, there was still a significant population of people flying to the U.S. for multiple reasons, including schools and emergency leave, to name a few. There were also people who needed to go to and from medical appointments. When COVID-19 first began impacting the battalion, the requirement was for any movement to be approved by the first general officer in the chain of command, for 2-1st ADA this was a two-star general. The 2-1st ADA's subordinate units had to learn how long it would take to get a general officer's signature, and the battalion had to communicate diligently with our higher headquarters in order to process movement memos as quickly as possible. We also had to provide the proper PPE to the personnel conducting the movements and train them how to conduct movement using effective COVID-19 mitigation practices.

Sustainment. A key issue was making sure we had enough PPE available to support all of our operational requirements. Stores quickly sold out of masks, and there simply was not enough PPE available in the Army supply system to provide all that we wanted at the time. At one point, a Soldier was seen utilizing an NBC promask to go to the PX due to the shortage. The shortage required 2-1st ADA to heavily prioritize the distribution of our available PPE. People requiring proper PPE included: those conducting movement of personnel, unit level clean teams, and personnel conducting training. Fortunately our battalion PA was able to work with our S4 team in order to ensure there was enough PPE on hand to handle all of this. A big part of this was achieved by having PPE consolidated and ready to distribute to our clean teams as needed.

Readiness. The biggest success was our ability to continue conducting the training necessary

to maintain readiness. This was achieved by getting appropriate PPE into the hands of those conducting training in close quarters, such as our Engagement Control Station operators. We had to ensure our personnel were properly trained in the use of PPE, while also ensuring that our limited supply of PPE was distributed effectively. Doing this enabled us to ensure there was absolutely no break in operational readiness.

What did we do well?

The main thing we did well was work as a team. Everyone pulled together across the staff at all levels to achieve the mission. The service members involved realized that they were part of one of the first units to respond to what was clearly a unique situation with few parallels in modern history. This common struggle led to powerful team cohesion and unity. Effective communication was also crucial to supporting the coordinated effort. Team members were constantly in contact with one another via phone calls, emails, teleconferences and VTC meetings.

What could we have done better?

Although 2-1st ADA Battalion led the way in implementing Facebook live town halls at the battalion level to communicate its coordinated response to COVID-19, the town halls were not implemented immediately. If the February 2020 scenario were to reoccur, the immediate use of social media as a line of communication would be one of the first steps. The use of social media as a means of communication was entirely appropriate to the situation created by this pandemic, yet it was not something that would have been considered an "official" line of communication prior to the pandemic. Looking back it was, and still is,

an excellent tool for the rapid dissemination of information.

Conclusion

The 2-1st ADA Battalion's response as one of the first ADA battalions affected by COVID-19 set an excellent example of strong team cohesion and unity, which led to continued operational readiness and mission success. The extraordinary team work across all sections and levels of command and a strong command emphasis on shortening the lines of communication to individual Soldiers were key reasons for 2-1st ADA's success. This enabled 2-1st ADA to effectively implement COVID-19 mitigation procedures into daily tasks, thus maintaining an agile force capable of continuing to excel in its wartime mission.

CPT Eric S. Warren is the battery commander for Bravo Battery, 2nd Battalion, 1st Air Defense Artillery at Camp Carroll, Korea. He previously served as the 2-1st ADA Battalion assistant operations officer. He led the battalion's COVID-19 Response operations during the initial outbreak, and throughout South Korea's period as the epicenter of the corona virus pandemic. He is a graduate of the United States Military Academy and married to Lharizza Warren.

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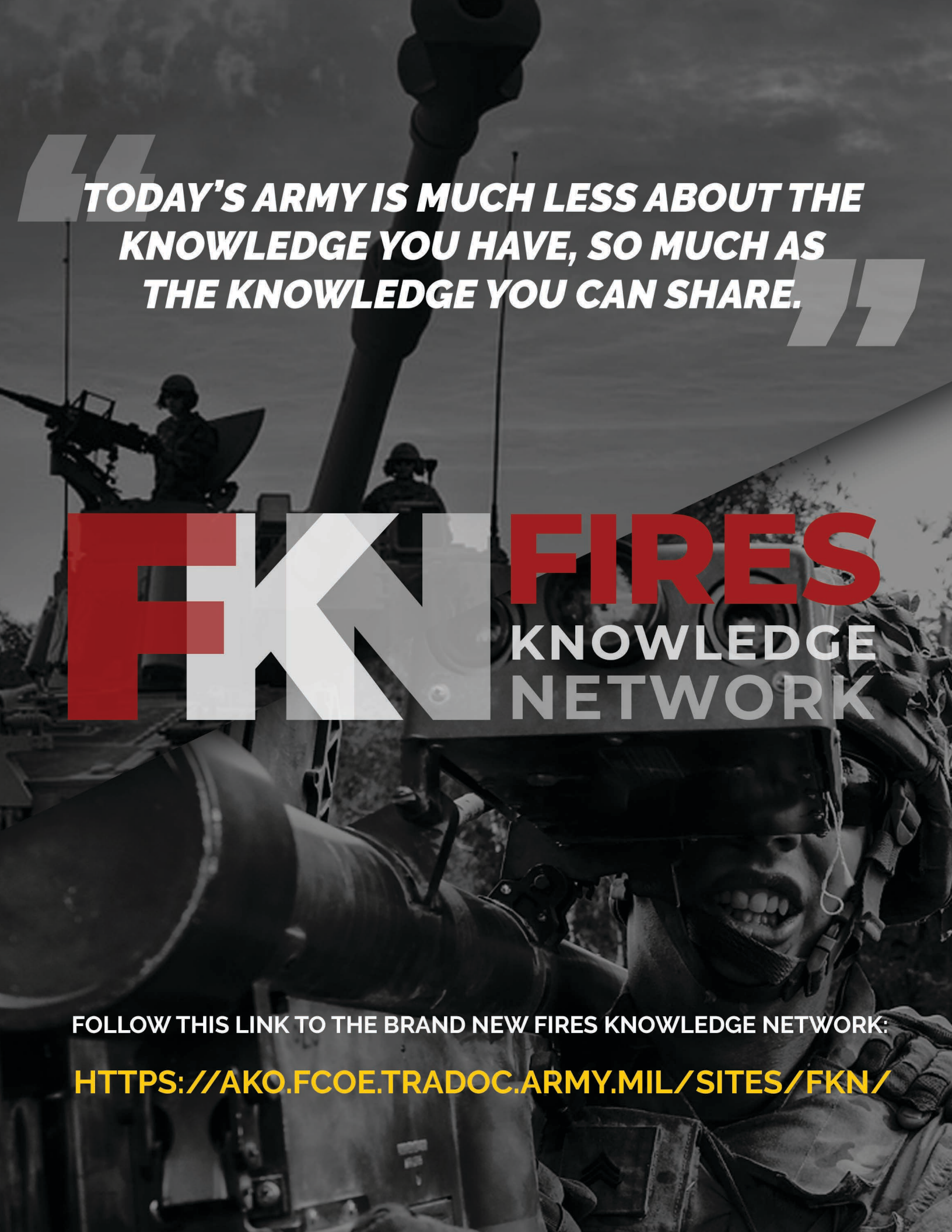
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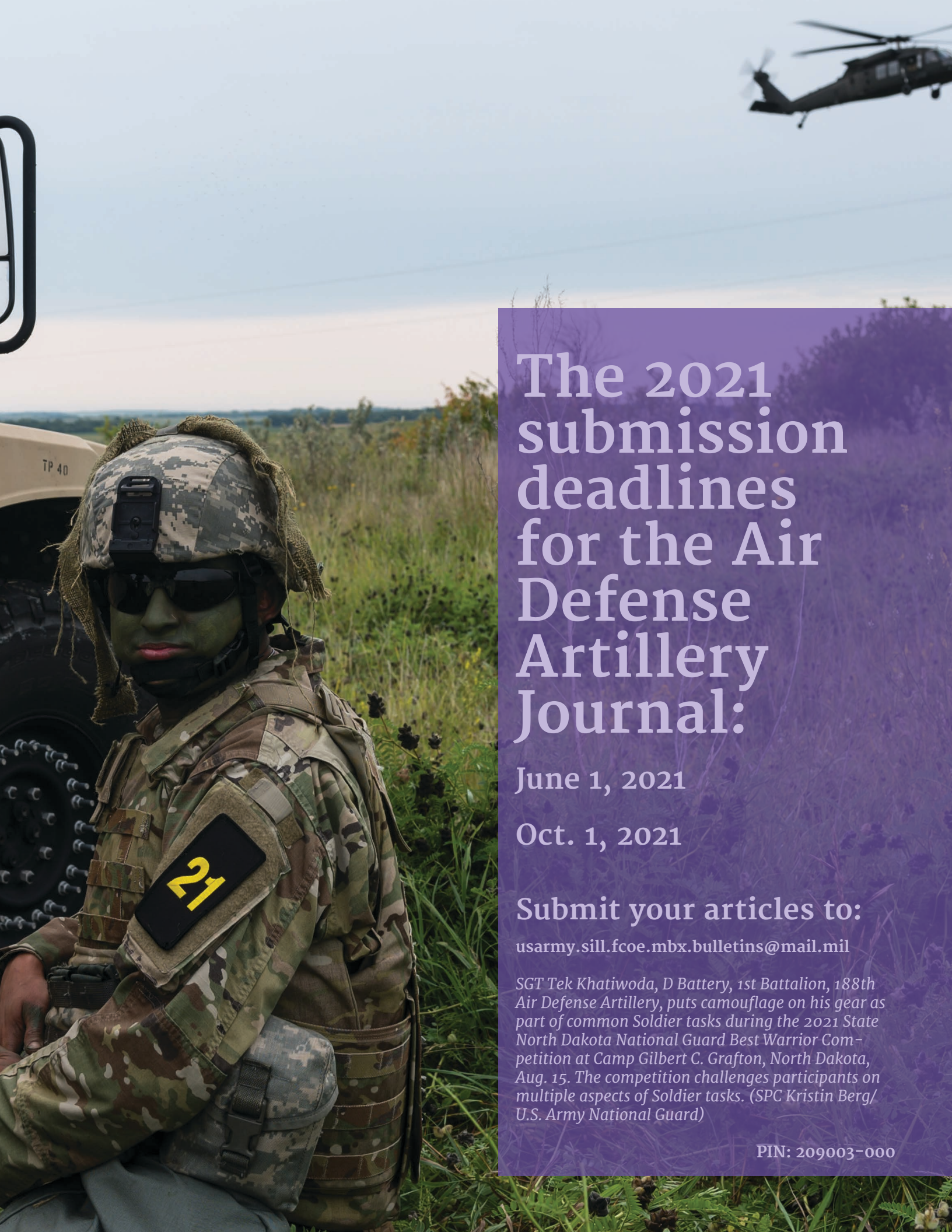


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SGT Tek Khatiwoda, D Battery, 1st Battalion, 188th Air Defense Artillery, puts camouflage on his gear as part of common Soldier tasks during the 2021 State North Dakota National Guard Best Warrior Competition at Camp Gilbert C. Grafton, North Dakota, Aug. 15. The competition challenges participants on multiple aspects of Soldier tasks. (SPC Kristin Berg/U.S. Army National Guard)

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